BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)
	)
Business Meeting	)
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CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, FEBRUARY 1, 2006

10:05 A.M.

Reported by:
Peter Petty
Contract No. 150-04-001

COMMISSIONERS PRESENT

Joseph Desmond, Chairperson

Jackalyne Pfannenstiel, Vice Chairperson

Arthur Rosenfeld

James D. Boyd

John L. Geesman

STAFF and ADVISORS PRESENT

Kevin Kennedy, Advisor

B.B. Blevins, Executive Director

William Chamberlain, Chief Counsel

Song Her, Secretariat

Pamela Doughman

Jason Orta

Raja Keanini

Eric Knight

Robert Worl

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Tav Commins

Michael Seaman

Terry Thompson

Michael Lozano

Mark Rawson

Larry Myer

Garret Shean

Marla Mueller

STAFF and ADVISORS PRESENT

Lisa DeCarlo

PUBLIC ADVISER

Margret Kim

ALSO PRESENT

Steven Kelly
Independent Energy Producers Association

Julee Malinowski-Ball
Public Policy Advocates
on behalf of California Biomass Energy Alliance

Robert Sarvey
representing Intervenor Garnica

Scott A. Galati, Attorney
Galati and Blek, LLP
on behalf of Caithness Blythe II

Ryan Wiser
Lawrence Berkeley National Laboratory

Raul "Bernie" Orozco
Sempra Energy

I N D E X

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P R O C E E D I N G S

10:05 a.m.

CHAIRPERSON DESMOND: Good morning. I'd like to thank everyone for joining us here this morning. Please rise and join me in reciting the Pledge of Allegiance.

(Whereupon the Pledge of Allegiance was recited in unison.)

CHAIRPERSON DESMOND: I'd like to know we have a fairly large agenda here today, and a number of speakers who wish to address several of the issues.

There has also been a series of amendments that are contained out on the table outside. And we'll note those as we go through.

But first item on the agenda is the consent calendar.

COMMISSIONER ROSENFELD: I move the consent calendar.

COMMISSIONER GEESMAN: Second.

CHAIRPERSON DESMOND: All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved.

Item number 2 is the 2006 Renewable Energy Investment Plan, and possible adoption of the 2006 Renewable Investment Plan Committee draft recommending an allocation of funds to be collected from January 1, 2007 to January 1, 2012, pursuant to Senate Bill 1194. And the investment plan is due to the Legislature on or before March 31, 2006. We have Pam Doughman.

MS. DOUGHMAN: Good morning, Commissioners. My name is Pam Doughman and I am the Staff Lead for the 2006 Renewable Energy Investment Plan.

Today I'm seeking approval of the 2006 Renewable Energy Investment Plan Committee draft with minor errata posted on the webpage for this proceeding, and provided for the public in attendance this morning.

The investment plan is required by legislation to recommend allocation of public goods charge funds collected from January 1, 2007 to January 1, 2012.

The Committee draft investment plan assumes that 750 million will be collected during the five years addressed by this investment plan, averaging 150 million per year.

The investment plan recommends allocating 633 million for supplemental energy payments for central station RPS renewables. This includes 347.63 million rollover from SB-1038, and 285 million of the funds to be collected during the period covered by this investment plan.

As a percent of the next five years of funding 285 million is a reduction in the amount allocated to the new renewables program.

Under current law the Energy Commission may shift these funds back to the new renewable facilities program if needed to address changing market conditions. Other than a recommendation in the investment plan, the Energy Commission does not have authority to reallocate funds away from the new renewables program.

In addition, the investment plan recommends allocating 360 million for emerging renewables including small wind, distributed generation, solar and other eligible technologies. The recommended allocation to the emerging renewables has been increased to fund the Energy Commission's portion of the California Solar Initiative. Eligible renewable distributed generation can count toward the RPS.

In addition, the investment plan recommends 75 million for existing solid fuel biomass and solar thermal electric facilities, which is about 15 million per year.

The investment plan recommends that no funding be allocated for existing wind at this time, but recommends flexibility to do so if market conditions change.

During 2004 28 solid fuel biomass facilities received about 17 million in production incentives ranging between 0.33 cents per kilowatt hour and 1 cent per kilowatt hour. Starting in 2005 and continuing for five years solid fuel biomass may be eligible for about 0.45 cents per kilowatt hour or 0.9 cents per kilowatt hour, depending on criteria specified in federal law.

In addition, the investment plan recommends 30 million for consumer information, outreach and marketing efforts for renewable energy. This includes funding for the Western Renewable Energy Generation Information System, and marketing support for the California Solar Initiative.

Also the investment plan asks to maintain and enhance flexibility to reallocate

money, adding flexibility to transfer funds out of the new renewable facilities program or into the existing renewable facilities program.

The Energy Commission needs legislative authority to implement the allocation recommendations and continue the renewable energy program.

Thank you.

CHAIRPERSON DESMOND: Thank you. Questions or comments from other Commissioners?

COMMISSIONER GEESMAN: I think we've got some public comments.

CHAIRPERSON DESMOND: Yes, we do.

COMMISSIONER GEESMAN: I'll say something after we've heard the public comments.

CHAIRPERSON DESMOND: Okay. First person I have is Steven Kelly from IEP. Mr. Kelly.

MR. KELLY: Thank you, Mr. Chairman, Commissioners. I'm Steven Kelly with the Independent Energy Producers Association.

And unfortunately I'm here not as a supporter of this plan, as forwarded to you. I have filed comments on the plan, going back to the staff draft.

And the core of my comments here will be, and what I'm concerned about, is the proposed reallocation of public goods charge moneys from the new account and the existing account to the other accounts, primarily to the emerging.

And I've a couple rationales that I'd like to bring to the full Commission's attention. Related to the new account, it's my observation at this point in time that the methodology that we are using in California to determine the winners and losers in the RPS procurement is not working. And this is the so-called least-cost/best-fit methodology.

This was a methodology that was put in statute. Many of the utilities were strong proponents of this. I think the ratepayer groups, TURN particularly, was a strong proponent of this, who now sits on the public review group that evaluates the contracts that have come through that methodology.

My concern is that process is broken and we don't know what's going to be the successor. And what I'd like to do is briefly read a filed document; this was filed on December 7th by Southern California Edison. It is their

supplement to the comments on the renewable procurement plan for 2005 and 2014.

And in those documents they point out or say, I quote: It's now clear that at least six of the eight projects that Edison signed contracts with, as a result of its 2003 interim solicitation, which was subject to the least-cost/ best-fit criteria, I believe, will require substantial transmission upgrades. When Edison filed its plan March 2005 Edison had executed five of the eight contracts that resulted from its 2003 solicitation. The projects did not have final locations and the studies to determine the transmission needs of the projects had not yet begun."

This is the product of the least-cost/ best-fit methodology that was resulting in a number of projects being selected without having tapped into the public goods charge money.

Edison goes on to state that they now have better information and it's evident that there are substantial transmission constraints affecting at least six of their eight projects that they selected as winners.

Now, historically we have not tapped

into the -- funding for the new program because the projects that had been selected through the current process didn't need any. And the rationale that has been put forward in the plan is because of that historical trend it's okay -- you're fairly confident that it's okay to shift money. And I just think that assumption is wrong based on the evidence that I'm seeing today.

The other fact that I'll bring to the Committee's attention, or the full Commission's attention is that the RPS goals may not be achieved, at least the 2010 goals. I think you're going to have a report from the CEC's verification report that shows that the incremental procurement targets are not being met by the utilities to date. Which means that in order to meet the goals that you've set out, the state has set out, you're going to have to accelerate your RPS procurement, or the utilities will, to make up for that difference.

Now, it's unfortunate apparently a lot of the projects that they have selected to date aren't going to be online by that date. But that doesn't mean that we can't move forward and be more aggressive. But when you do that I think

you're going to be tapping into slightly more expensive projects and shifting the money out of the new account that goes for the supplemental energy payments at this time, without hardly any evidence that it's not going to be needed, I think is a mistake.

Related to the existing account there's also a proposal to reduce the funding for that. And I'll just make the comment at this time that in the Public Utilities Commission there is an ongoing proceeding dealing with the avoided cost payments for QFs. Most of these renewable entities that are subject to this potential funding source are QFs.

And that decision, or that proceeding should be completed June/July timeframe. If the IOU positions in that proceeding would prevail, then it's highly likely that the tier one resources, these are the biomass and solar resources in tier one, are going to have very high difficult bar to achieve to continue operation. Even if gas prices sustain themselves as high.

The utilities have filed proposals in that litigation proceeding which would reduce the heat rate that is used to measure the payments for

PG&E from approximately 9800 down to the 7000s. You take that heat rate and you multiply it by gas and you get the payment.

That kind of significant reduction, if the utility position prevails in that PUC proceeding, is going to have dramatic effects. We'll know the answer to that in June or July.

My recommendation is don't reallocate these moneys until we get a better sense of what the payment stream is going to be for these vital resources. And that's not going to be known until the PUC completes their proceeding.

The other reason that I would argue that it might not be prudent to make the reallocation as proposed in the plan today is that I think it's just going to create another excuse for non-RPS compliance.

I'm seeing a lot of filings today; and what I'm seeing from the ESPs and the utilities that are making these filings is that the regulators didn't allow us to do transmission in a timely manner.

Pretty soon we're going to hear the generators didn't bring projects that we thought were viable.

It should not be the case that we're in a position to say there's no money due to supplementary energy payments, for example, to make the RPS compliant because the Energy Commission chose to move the money prematurely. I'm not opposed to moving the money; I just don't think there's evidence at this point in time that we should do that.

So, as a summary, I think the reallocation now will likely contribute to continued RPS noncompliance, failure. I think there's a lot of rhetoric versus reality in the California RPS program. These RPS goals make great cover for corporate annual reports, very nice pictures. But as a practical matter, we're not getting the energy delivered to the grid as proposed by the plan. And reallocating these moneys at this time I think are going to make that even more difficult.

So that's what I have to say. Thank you very much, I appreciate it.

COMMISSIONER GEESMAN: Mr. Chairman.

CHAIRPERSON DESMOND: Thank you. Commissioner Geesman.

COMMISSIONER GEESMAN: Steven, in light

of the emphasis in the plan, in the investment plan, for the need for flexibility is there anything that you see in the proposed investment plan that would prevent us from reallocating the money back if, in fact, your vision of the future turns out to be the one that prevails?

MR. KELLY: I've been doing this for a long time and I've always found it's very hard to move money back. It's usually it gets ingrained. It's going to get cost-allocated and committed to certain kinds of resources. And I know you've got some obligations under the solar program. I'm not here to denigrate that; I'm a strong supporter of solar.

But once the money gets moved, plans will be made, things will be shifted and it's very difficult to shift it back.

I would much prefer you keep the flexibility, and I've been a strong supporter of your flexibility in this program over the years, to keep the flexibility, but wait and see where the money's actually going to be needed.

What's going on now is the money is being shifted to what appear to be relatively high-cost renewable resources, away from some that

potentially have lower costs. Which means that it's going to be harder to achieve the RPS with a limited budget.

So, I'd rather keep it where it is historically; build the flexibility that you think you need; and then I support you to have it and take this up down the road when we have more information. We've only had a few procurements and they're just not indicators of success yet.

COMMISSIONER GEESMAN: Let me also ask you, you were concerned, and you've been around Sacramento quite awhile, about the long-term viability of large unexpended balances in any particular account. It scares the bejesus out of me, and I think the Legislature and the public expect us to put this money to work in the appropriate places. That's why we've tried to build some flexibility in so that our view of what the appropriate places are can shift as needs shift.

But do you have any concern about the potential target that large, unexpended sums can constitute in this town?

MR. KELLY: There are no -- obviously there'll be a lot of eyes on this. But the

problem is if the Legislature and the Governor's Office are fully behind the RPS, then they're going to have to realize that they're not going to get there by moving moneys into accounts that the achievement rate are going to be low.

I think, as a practical matter, I mean the big question I have when I see these results of the past RPSs is what projects were not accepted by the utilities in the PRG group that could have been made operational, and how much would they have cost.

Now, that is totally redacted from the public, so I have no way of knowing what those projects are. But it would be helpful, and I actually think this RPS project, particularly the program at the PUC, needs to be audited. I mean I'd like to know what was not selected that would have tapped into these moneys and probably could be operational by 2010 to make the RPS. We have no way of knowing that today.

But I think that's the way I'd have to deal with it in the Legislature. If they really want to be RPS compliant then they've got to put the money where it can bring a result.

COMMISSIONER GEESMAN: Well, as you'll

recall from the IEPR, we'll probably find out that information about two seconds either before or after you do. We don't know either.

MR. KELLY: I understand. I mean that's a huge problem in what's going on. But when I see these, finally see this public information that I, I mean this report that I reviewed is fairly heavily redacted, but there is some indications that what's going on today is not working.

And, you know, the people that have been big supporters of least-cost/best-fit are the only ones who get to see this. And now we find out that you have six out of eight Edison contracts, at least, that don't have site control or don't have transmission. How do they get through a least-cost/best-fit methodology? I don't know. I cannot fathom that.

COMMISSIONER GEESMAN: Thank you.

VICE CHAIRPERSON PFANNENSTIEL: Mr. Chairman.

CHAIRPERSON DESMOND: Commissioner Pfannenstiel. Not to beat the issue of flexibility to death, but I just want to make sure that it is clear that we share your concerns for the going forward availability of SEPS dollars.

We do expect to make sure that they're there to the extent they have been captured under the public goods charge.

But there is an asymmetry in flexibility under the existing legislation such that if we ended up not being able to use those dollars we wouldn't be able to move them into other programs. But we can move them from other programs into the account, into the SEP account.

So, I just want to make sure that you understand that that's how we see it. That we have that ability to do it that way, but not the other way.

My further comment is just the issue of the uncertainty of program design right now, and the process going forward. I think we all are looking for some corrections to make it work. And we all want to work together to do that to get, to achieve the RPS goals.

I think there will be and need to be some changes. And I think we do have the flexibility to meet those changes. But thank you for your keeping on top of this and keeping us directed in that way.

CHAIRPERSON DESMOND: Commissioner Boyd.

COMMISSIONER BOYD: I just want to say that I am troubled by Mr. Kelly's presentation, or by the thrust of it, when he parrots back at us some of our own IEPR language and concerns.

It is troubling to me; I'll just let it ride at that right now as we hear from other witnesses or any staff comments. But I think he makes some good points.

CHAIRPERSON DESMOND: Thank you. Do we have other public comments? Let me just, Mr. Kelly, before you leave, if you -- a couple things I want to follow on with what Commissioner Geesman was saying.

And I appreciate what you've pointed out here regarding the difficulties associated with the least-cost/best-fit methodology and the PRG process that I think the Commissioner is already on record as pointing out, makes things difficult in terms of the transparency associated with that.

But clearly, there are changes that I think warrant consideration of the modest change that has been proposed here, the run-up in gas prices being one. But if we were to take a step back, these dollars are being redirected in areas that the Governor has provided specific direction,

particularly in the area of biomass.

And I'd also point out that collectively we're talking about a reduction of almost 9 percent over a period of ten years. It's difficult for me to see that a reduction of only 9 percent in funding from what would be $696 million to $633 would result in a failure to meet the RPS goals.

I think clearly it is one of several things that has to be done, but I don't think that the change, as-is, with the ability to move it back is -- I find persuasive at this time to suggest differently.

MR. KELLY: If I could just respond quickly, because the problem that I see is not the moving of the money to where you can use it that was raised earlier. The problem that I see today is that there's no evidence that significant amount of moneys might not be needed.

And while you say it's only 9 percent, that might be a 200 megawatt geothermal facility coming out of Imperial Valley, which, you know, it may be critical for that kind of project.

And it's those kinds of projects that are going to be the ones that are going to come

online if we want to achieve these goals. There's lots of energy behind them; they've very clean; they might be a little bit more expensive than some of the stuff that seems to be in the press today that's been picked up.

But when you pick up a 200 megawatt geothermal facility, on a per-kW hour, there may be a lot of money that is needed from the SEP funds over the course of 10 years, 20 years.

And we just don't know that yet. That's the point that I'm really emphasizing, is that I just think this proposal is premature now because there's very little evidence. I know PG&E is supposed to be releasing some results of procurements fairly shortly. I haven't seen those. Probably won't know too much about them. But that will be the first one that might trigger the SEP payments.

But the way the PUC structured it now you don't need energy delivered to be RPS compliant in 2010, you can just have a contract. And you get to roll it over. I mean, so who knows?

CHAIRPERSON DESMOND: Thank you.

MS. MALINOWSKI-BALL: Good morning,

Julee Malinowski-Ball on behalf of the California Biomass Energy Alliance. I didn't want Steven Kelly to think he was out here on his own with the statements that he just made. In fact, the Biomass Energy Alliance is in synch with his comments.

And he did touch on the fact that, you know, there are a lot of unknowns out there. And to make the shifts that we're making in the accounts might be premature. And, you know, we don't know what the contracts for the biomass facilities are going to look like beginning July 1 in the PG&E territory. We could need the money; we could not need the money. We could actually need the money even more under the scenarios that are being discussed at the PUC.

I think we would recommend that you keep the allocations where they are and fight for the full flexibility in the Legislature to move among the accounts.

And while you are correct that you could shift money back into the new account, you cannot into the existing account if it's needed there. That full flexibility is essential to make the changes that you made, and there's no guarantee

you're going to get it.

So if, in the end, which what happened in the last investment plan debate at the Energy Commission was at the last minute you had these restrictions put on you about moving money in between accounts. So you were stuck with what you had. And it could easily happen again.

So we would, you know, we want to caution you on that and suggest there's another avenue to moving this investment plan forward in the Legislature.

You know, the only other point I really wanted to make was on the existing chapter in the referenced biomass facilities and greenhouse gas emissions, we have outlined in our comments our problems with the statements made on page 42. We think they're incorrect. There's no citation as to proving the statements that were made --

COMMISSIONER GEESMAN: Have you had a chance to look at the staff errata?

MS. MALINOWSKI-BALL: I have not.

COMMISSIONER GEESMAN: I think that was designed to be responsive to your comments.

MS. MALINOWSKI-BALL: Okay, thank you, I will take a look at it. Appreciate your thoughts.

CHAIRPERSON DESMOND: Any further comments? Commissioner Geesman.

COMMISSIONER GEESMAN: Mr. Chairman, I'd move the adoption of the plan as submitted. This reflects the best judgment that we can make based on the evidence that we have now. It does reflect the development of a fairly substantial body of information through the IEPR process.

We did hold a public workshop on the draft plan in November, which contained the allocations that we're carrying forward in the final plan. We received extensive public comment, went over that quite carefully.

We could very well be wrong. The situation may change six months from now or 12 months from now or 18 months from now, but that's why it's so important to have flexibility built into both the structure of the plan and into our own expectations.

I think it's important to put this money to use productively as quickly as we can. And I think we need to recognize nobody has a perfect crystal ball.

I don't accept the recommendation that Julee made, in terms of just leaving things as

they are, as being satisfactory. I think the Legislature and the Governor and the public expect us to make the best estimate we can, based on the information we have. And this plan reflects that now.

We may very well have to change it in the future, but fortunately I think we've got the flexibility to do that.

CHAIRPERSON DESMOND: Thank you. I think also that the Commission has a history of revisiting, and where appropriate, going back and increasing. I think at the last business meeting we actually raised the rebate on the small wind resources, as a pretty good indication that when things are not going as planned, we do take the necessary steps and action.

But I would also say, and I'll look for your support, we will, in fact, look to pursue that flexibility this year in the reauthorization, so that this becomes a moot issue, and that, in fact, we have the ability to move moneys as appropriate in response to what the market is dictating to us.

So, we'll count on your support in that effort.

VICE CHAIRPERSON PFANNENSTIEL: Mr. Chairman, I would second Commissioner Geesman's motion.

CHAIRPERSON DESMOND: All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you.

Agenda item 3 is the Renewable Portfolio Standard Procurement Verification Report. And possible approval of that report under Senate Bill 1078 which has directed the Energy Commission to design and implement a tracking system to verify compliance with the RPS. This report transmits the renewable procurement verification findings for 2004 to the California Public Utilities Commission. Mr. Orta.

MR. ORTA: Good morning; I'm Jason Orta from the Energy Commission's renewable energy program.

Staff is seeking the Commission adoption of the renewable portfolio standard procurement verification report along with the associated errata.

Senate Bill 1078 of 2002 established the

California renewable portfolio standard and calls for the state's investor-owned utilities, electric service providers and community choice aggregators to meet 20 percent of their electricity sales with eligible sources of renewable energy by 2017.

However, California's energy agencies have committed to achieving the 20 percent target by 2010.

SB-1078 also requires the Energy Commission to design and implement a tracking system to verify compliance with the RPS program. The RPS procurement verification report does the following for PG&E, Southern California Edison, and San Diego Gas and Electric.

This report verifies the following to the extent possible. RPS eligibility. The amount of renewable energy procured by each IOU. And that RPS procurement exclusively serves California's RPS and does not support another renewable energy market claim. And that renewable facilities located out of state satisfy the Energy Commission's RPS energy delivery requirements.

The report also quantifies the amount of incremental geothermal energy. Additionally, the report applies statutory requirements to identify

baseline procurement and applies the CPUC's rules to the extent possible to identify baseline procurement, incremental procurement and annual procurement.

The report also compares the CPUC's annual procurement targets for each IOU with the Energy Commission's findings for how much procurement qualifies towards those targets.

The Energy Commission intends to adopt an annual RPS verification report to meet the statutory requirements for the RPS, accounting and verification; and then transmit that report to the CPUC.

The CPUC, in turn, is then responsible for developing and implementing the annual procurement target for each IOU. And will determine if an IOU is in compliance with the RPS consistent with the CPUC's flexible compliance rules; and the CPUC may levy penalties for noncompliance.

However, the CPUC is further refining its reporting requirings and compliance determinations. The results of these efforts are expected to be presented in CPUC decisions in 2006.

This report was completed with input from the public. A staff draft of the report was released on November 23, 2005. On December 7, 2005, the Renewables Committee held a workshop to discuss the staff draft. The Committee draft, released on January 6, 2006, revised the staff draft to reflect updated procurement data from PG&E and Southern California Edison, public comments and additional staff analysis.

This report was originally scheduled for adoption at the January 18, 2006 business meeting. However, staff released an errata to the report on January 23, 2006 that does the following: The errata revises the estimate for San Diego Gas and Electric's incremental procurement based on additional information that was not discernible from SDG&E's original filings.

The errata also clarifies that banking is not accounted for in this report. And also the errata revised the percent renewable figures to divide current year procurement by the current year retail sales. Along with making the necessary conforming changes to the text and tables.

Additionally, staff has noted and

corrected two typographical errors in the report. Page 4, paragraph 2, sentence 1 should be replaced as follows: The APT in the current year is the sum of the previous year's APT plus the current year's IPT."

Additionally, page 27, table 8: Data in two cells need to be revised. These revisions are corrections of typographical errors in regards to San Diego Gas and Electric's procurement that's eligible towards meeting the APT for 2004. For San Diego Gas and Electric that total is 677,966 megawatt hours which exceeds their 2004 APT by 254,630 megawatt hours.

In conclusion, staff is seeking the Energy Commission adoption of the RPS procurement verification report and the errata.

CHAIRPERSON DESMOND: Comments?

COMMISSIONER GEESMAN: I move the item.

VICE CHAIRPERSON PFANNENSTIEL: Second.

CHAIRPERSON DESMOND: I just had a couple questions, perhaps, on an update basis on WREGIS. Since obviously the expectation is that we are moving towards an automated system, and it has taken some time to move this process along. And I guess the question that I would have is if

you could provide this Commission with an update on where we're at right now.

And I'll tell you, I share that because if we look at the Cal-ISO, and I don't mention them to pick on them, but MRTU used to be called MDO2, and I would mark the design in 2002; it's now '08.

So I just want to make sure we're not going down a path that perpetually have us saying next year we think we'll have it up and running. Or have we thought through all the potential problems on the transfer of the ownership and costs of maintaining that if it's, in fact, transferred over to the WECC.

So, if you would, just please a quick update because there wasn't a whole lot of detail in the report on that.

MS. KEANINI: Right. This is Rasa Keanini; I'm the WREGIS program lead in the renewable energy office. And so I have a brief update.

I presume that most of the Commissioners are familiar with the project. So I'll explain, we're currently in the middle of the procurement process. And the WREGIS evaluation team is

subject to confidentiality, so we can't share a lot about the process other than the planning proposal due date was originally February 3rd. And due to a clarification that was needed in the requirements, that was part of addendum number nine, the final proposals are now due February 21st of 2006.

At this time we are not certain how many final proposals we will receive. And we are still saying that WREGIS is expected to be operational in early 2007. And that's being vague because it's unexpected that it would be January of 2007, but it is expected to happen in the early part of 2007.

CHAIRPERSON DESMOND: Is it correct that the current approach is that we will build this from scratch? Meaning that the proposed respondents to the RFP will, in fact, go and develop the system for California's needs?

MS. KEANINI: No. Let me clarify a little bit. The RFP portion was to seek out a bidder who has an existing renewable energy registry and tracking system that would then be modified to meet WREGIS requirements. So we had some pretty specific requirements that had to be

in existing system.

We are allowing the successful bidder, or you know, the one who wins the contract, that they have a year in which to get WREGIS operational. We also mention in the RFP, however, that we prefer it to be eight months that they take, rather than the full year.

CHAIRPERSON DESMOND: Okay, thank you. Those were the only questions I had. We have a motion and a second.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you; thank you for the update.

MR. ORTA: Thank you.

CHAIRPERSON DESMOND: Agenda item 4 is the Walnut Creek Energy Park. Possible approval of the Executive Director's recommendation on data adequacy for the Walnut Creek Energy Park application for certification and consideration of Committee assignment.

Walnut Creek Energy, LLC., a wholly owned subsidiary of Edison Mission Energy filed an application for certification to construct and operate a 500 megawatt peaking power plant in the

City of Industry in Los Angeles County. Mr. Knight.

MR. KNIGHT: Good morning, Mr. Chairman and Commissioners; my name is Eric Knight, I'm the Staff Project Manager for the Walnut Creek Energy Park application for certification. And it's docket number 05-AFC-2.

On November 22, 2005, Edison Mission Energy filed an AFC for a 500 megawatt peaking plant in the City of Industry. I'm here today to give a brief overview of the Executive Director's revised data adequacy recommendation on the AFC.

Staff's initial review of the AFC determined that it did not contain all the information required by the 12-month siting regulations for six of the 23 technical disciplines.

Those areas were air quality, project overview, socioeconomics, transmission system engineering, visual resources and water resources.

The Executive Director's initial recommendation on data adequacy was published on December 21, 2005. Subsequent to that on January 13, 2006, the applicant docketed 125 copies of an AFC supplement; and provided confidential air

quality information under separate cover on January 12th and 25th.

Attachment B of the Executive Director's revised recommendation, which was published on January 30th, contains staff's detailed data adequacy sheets for the six technical areas previously mentioned that were inadequate. And these sheets have been revised to reference the supplemental information that was provided.

Based on staff's review of the supplemental information, staff now believes the AFC contains the information required under section 1704 of the siting regulations and is therefore complete.

If the Commission agrees with this recommendation we request that a Committee be assigned to the project. Thank you.

CHAIRPERSON DESMOND: Thank you.

COMMISSIONER GEESMAN: Move the staff recommendation.

COMMISSIONER BOYD: Second.

CHAIRPERSON DESMOND: Good. Any motions for Committee assignment?

COMMISSIONER BOYD: Yes, Mr. Chairman, as a member of the Siting Committee, I would like

to recommend a motion that Jackalyne Pfannenstiel be the Presiding Member, and that Commissioner Geesman be the Associate Member. Therefore relieving me of that responsibility.

CHAIRPERSON DESMOND: Thank you. Do we have a second for that, as well?

COMMISSIONER ROSENFELD: Second.

CHAIRPERSON DESMOND: Very good. An enthusiastic second, I would note.

(Laughter.)

CHAIRPERSON DESMOND: So we have two motions. Call for the vote on the first, accepting the recommendation of staff.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved.

And the Committee assignments with Commissioner Pfannenstiel as the lead and Commissioner Geesman as the second.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you.

Next item, Sun Valley Power Project.

And this is very similar in that it's a possible approval of the Executive Director's recommendation on data adequacy for the Sun Valley Power Project application for certification 05-AFC-3 and consideration of Committee assignment.

Valle del Sol, LLC, a wholly owned subsidiary of Edison Mission Energy, filed the Sun Valley Power Project AFC to construct and operate a 500 megawatt peaking power plant near Romoland in Riverside County. Mr. Worl.

MR. WORL: Good morning, Chairman and Commissioners. My name is Robert Worl; I'm the Project Manager for the Sun Valley Energy Project in Romoland, which is in Riverside County.

This project is essentially identical in terms of equipment to the Walnut Creek project that's also proposed. The proponent here is Sun Valley -- or is Valle del Sol, LLC, which is also a wholly owned subsidiary of Edison Mission Energy.

The location of the project in unincorporated Riverside County is also very near the already-approved and nearing-completion Inland Empire project. In the same general vicinity of Romoland.

The original application review led to a Executive Director's recommendation that the project, as filed, it was inadequate in five areas. That was air quality, project overview, socioeconomics, transmission system engineering and water resources.

With the supplemental filing that was provided January 13th and two confidential filings in air quality January 12th and 25th, the current recommendation is, after review by staff, that the project is data adequate.

And if the Commission would approve that, we would then request that you appoint a Committee to oversee the project.

CHAIRPERSON DESMOND: Okay. Mr. Worl, just a quick point of clarification. Both this project and the other provided confidential air quality information. I just want to confirm the nature of that is simply related to the offsets --

MR. WORL: Correct.

CHAIRPERSON DESMOND: -- and the source of those offsets?

MR. WORL: Correct.

CHAIRPERSON DESMOND: Okay, thank you.

COMMISSIONER GEESMAN: Move the staff

recommendation.

COMMISSIONER BOYD: Second.

CHAIRPERSON DESMOND: All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved.

COMMISSIONER BOYD: Mr. Chairman, I'd like to make a motion to appoint a Siting Committee for this project. I'd like to recommend that Commissioner Geesman be the Presiding Member, and that Commissioner Pfannenstiel be the Associate Member.

CHAIRPERSON DESMOND: Thank you. Do we have a second?

COMMISSIONER ROSENFELD: Second.

(Laughter.)

CHAIRPERSON DESMOND: Very good. Call for the vote.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: All those opposed? So moved. And, Commissioner Pfannenstiel, I don't sense that same enthusiasm.

(Laughter.)

CHAIRPERSON DESMOND: Okay, thank you. Item number 6. Trustees of the California State University. Possible approval of the seven highest scoring grant applications totaling $524,086 in response to solicitation cycle 05-01 of the Energy Innovations Small Grant Program, which is PIER funded. Mr. Jenkins.

MR. JENKINS: Good morning, Commissioners. I'm Alec Jenkins, and I'm the Manager of the Energy Innovations Small Grant Program.

Item 6 on the agenda contains seven competitively selected small grant projects that have been approved by the Commission's R&D Committee for consideration by the Commission.

The projects were selected from 59 grant applications received to solicitation 05-01. In terms of PIER areas, three are in the building end-use efficiency area, two renewable-related technologies, and the remaining two are the industrial ag-water area.

In terms of applicants, four are offered by small business, two by the academic community and one by an individual.

The total funding requested for the

seven projects is $524,086, which is well within the available funding.

I recommend the seven grant projects for the Commission's consideration and approval.

CHAIRPERSON DESMOND: Thank you. Comments or questions?

COMMISSIONER ROSENFELD: I move the item.

COMMISSIONER GEESMAN: Second.

VICE CHAIRPERSON PFANNENSTIEL: Mr. Chairman, before we vote I have just a couple clarifying questions on them. First of all, I'm looking at the description of the dollars here; this is 524,000. And for the whole small grant program this year, does that use up the money in the whole program for the year solicitation?

MR. JENKINS: No, it does not, Commissioner. There is funding left over from the '05, and there's funding available in '06.

VICE CHAIRPERSON PFANNENSTIEL: And so there'll be another solicitation sometime in the next couple months, is that how --

MR. JENKINS: The solicitations and the award process tend to overlap cyclically. We have a solicitation out on the street now. And I have,

from a previous solicitation, more proposed awards to bring to the Commission.

VICE CHAIRPERSON PFANNENSTIEL: Just a general question. You provided some interesting information about past grants that have been awarded, quite a few over the past several years. Do you have a sense in general of how many of these had actually gone into some kind of commercial production, or are now being actually applied in the program areas for which they were awarded the grants?

MR. JENKINS: Thank you for that question, Commissioner. Our surveys, which are annual, have been identifying considerable follow-on funding, as I've mentioned before, 11 to 1 for the amount of grant funding awarded.

These are general pre research and development projects, they're concept feasibility. Which means that we can't -- we anticipate there will be delays before a project that has proven conceptually feasible goes through the R&D process and then proceeds to commercialization.

We do have projects that leap from to commercialization. One of our proposed awardees today has an earlier project leaped over the R&D

process to license this technology.

But I don't have the explicit data that you are looking for. However, in our forthcoming annual survey we are going to try and ferret out that information because it's a good question. We would like to have the answer to it.

VICE CHAIRPERSON PFANNENSTIEL: Okay. Your number, I think, is almost 200 projects to date, grants to date. And, you know, it seems like we've been doing this long enough that some of those should be headed into use by now.

MR. JENKINS: Yes, and --

VICE CHAIRPERSON PFANNENSTIEL: So I would be interested in that.

MR. JENKINS: -- and we do have those -- we do have many of those in use, I just can't give you --

VICE CHAIRPERSON PFANNENSTIEL: Great.

MR. JENKINS: -- quantification.

VICE CHAIRPERSON PFANNENSTIEL: Thank you.

CHAIRPERSON DESMOND: Mr. Jenkins, I also had a question on one of the specific grants, number 7, which is the proposal for the advanced onboard diagnostics for air conditioners and heat

pumps. And just a couple observations and questions for clarification.

In the summary of benefits it talks about the system having a potential to save California ratepayers an average of 17 percent in the cost of electricity. And I'm assuming that what we're referring to here is a 70 percent reduction in the consumption of energy for the AC systems that it's being applied.

MR. JENKINS: That's the number.

CHAIRPERSON DESMOND: Okay, thanks. Also, the project summary describes, in appendix A, research to date, which it indicates is proprietary. And there's nothing here, there was no appendix A, at least in the package. But the question relates to this phase, whether this will also become proprietary or not.

MR. JENKINS: Well, this is a small business, Proctor Engineering. Proctor Engineering has proprietary products that it does market. We would expect that this project, if successful, would lead to proprietary material, which could be patented. And that a business could be built around that.

So we do look for, and this relates to

Commissioner Pfannenstiel's question, we do look for, you know, small businesses to be able to take their products forward with patent protection because they'll succeed that way.

CHAIRPERSON DESMOND: Because the grant application cover page then refers to that it does not contain proprietary information. And unrestricted distribution has been authorized. So, my question is whether the results of the research here are intended to be distributed, or somehow that that's inconsistent with the previous --

MR. JENKINS: I think that checkmark is inconsistent, because the grant application does have proprietary material.

CHAIRPERSON DESMOND: Okay. All right. And then I guess just as an observation, there are five sites being done here, --

MR. JENKINS: Yes.

CHAIRPERSON DESMOND: -- and obviously I don't know that five is a significant enough sample to establish the 17 percent estimated savings to verify that. But, what I would hope is that we look for opportunities that this research result could make its way into the next standards

proceeding regarding the requirement of existing AC systems to have embedded onboard diagnostics or the ability to do that.

So I think that there's an interesting element here that could be considered as we take up the next round of appliance efficiency standards and building standards. So, those were my comments.

MR. JENKINS: I appreciate that comment. This project was strongly supported by Commission evaluators and so, with the same idea in mind.

CHAIRPERSON DESMOND: Great.

MR. JENKINS: Thank you.

CHAIRPERSON DESMOND: Thank you. Do we need to correct that grant application page if it's --

MR. JENKINS: My concern is that the public-released information, which is the information that's circulated to Commissioners, that it ends up being in the package, the agenda package, does not contain proprietary material. In that sense we didn't slip up.

But your comment, your observation is correct. This needs to be taken care of.

CHAIRPERSON DESMOND: Okay. So I guess

we'll entertain a motion for approval with the understanding we're going to correct that grant application.

MR. JENKINS: It's the cover page.

CHAIRPERSON DESMOND: Somebody needs to move --

MR. JENKINS: It's the cover page that didn't have the check --

CHAIRPERSON DESMOND: Yeah, it's a cover page correction.

COMMISSIONER ROSENFELD: Before I move the item, Alec, I think this is the last time you're going to be fathering this operation, and I just want to say I followed this pretty closely for several years that Alec's been running this. And it's a killing job; it's every four months you've got to select the best ten, and at the same time, Alec's put a lot of time into making sure that the previous completed projects do get commercialized and pushed.

And I've been impressed, if not overwhelmed, with his competence and devotion. And we're going to miss you. And with that I move the motion.

MR. JENKINS: Thank you, Commissioner.

COMMISSIONER GEESMAN: I will second it with the observation that I knew Alec in a prior life, and marveled at his dedication then. There's about 19 years that I can't account for, but I should say in the last three and a half years I think this effort has been one of the finest ones that the Commission has had. And I know that you have been directly responsible for that. I think it's something you should be very proud of, I know we are.

MR. JENKINS: Thank you, Commissioner.

CHAIRPERSON DESMOND: Commissioner Boyd.

COMMISSIONER BOYD: No, I'm just --

CHAIRPERSON DESMOND: Okay. Let me also, it has been my observation, as well, here, Mr. Jenkins, that the work has been excellent, and the projects that have been identified have always come forward and provided real value.

So, we have a motion; do we have a second?

COMMISSIONER GEESMAN: Second.

CHAIRPERSON DESMOND: Second. All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So

moved. Thank you.

MR. JENKINS: Thank you.

CHAIRPERSON DESMOND: Okay, agenda item 7, California Commissioning Collaborative. Possible approval of contract 400-02-014 for $50,000 membership fee with the California Commissioning Collaborative. Mr. Commins.

MR. COMMINS: Good morning; my name is Tab Commins and I'm with the building and appliance office.

Staff is seeking approval to renew our membership with the California Commissioning Collaborative for the cost of $50,000. The California Commissioning Collaborative was formed in the year 2000 and retains both federal and California nonprofit status.

The Collaborative is comprised of many organizations including all of the major California utilities, the U.S. Department of Energy, various state agencies and California Commissioning agents.

The Collaborative promotes education, training, stronger building codes and commissioning standards to encourage expansion of the practice of building commissioning in the

California new construction and retrofit markets.

Building commissioning is the systematic process of evaluating buildings to make sure that the building systems are designed, built and operated as intended. Expanded building commissioning has the potential to improve public and private commercial buildings in California in terms of their energy efficiency, comfort and indoor air quality.

The Collaborative has developed a work plan to promote commissioning in California. And this work plan is funded by the Collaborative board members. The Collaborative is the only organization conducting this type of work in California.

If this contract is not approved the Energy Commission will lose its position on the board of directors. By retaining this position we will continue our oversight of the Collaborative's work to the advantage of the California Energy Commission and to the State of California.

Thank you.

CHAIRPERSON DESMOND: Thank you. Commissioners.

VICE CHAIRPERSON PFANNENSTIEL: Mr.

Chairman, I'd just like to point out that commissioning is a key element of the Governor's green building initiative and the work that's going on in California now, trying to improve the efficiency of commercial buildings.

And the Collaborative has been a central part of this effort. We've turned to the Collaborative, the people working on the green building action team have turned to the Collaborative for help and to take on a major role in this initiative.

Therefore, I move this item.

COMMISSIONER ROSENFELD: Second.

CHAIRPERSON DESMOND: Considering this is entirely consistent with the adoption of the existing building efficiency report, I will call for the vote.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you.

MR. COMMINS: Thank you.

CHAIRPERSON DESMOND: Item number 8. The Regents of the University of California at Davis, California Lighting Technology Center, and

possible approval of work authorization MR-044 under Energy Commission agreement number 500-02-004 not to exceed $560,000 with the Regents of the University of California at Davis, California, Lighting Technology Center.

This work authorization will develop and demonstrate energy efficiency lighting systems and improve the functionality of the Sensor Placement Optimization Tool, otherwise known as SPOT, software. Mr. Seaman.

MR. SEAMAN: Good morning, Commissioners. I'm Michael Seaman from the PIER buildings program.

This work authorization will enable the PIER buildings program to capture additional energy savings from precursory lighting products developed during the lighting research program just concluded.

At $560,000, the work authorization will commit 22 percent of the current fiscal year PIER lighting budget of $2.5 million. This will leave 1.8 million in the current fiscal year lighting budget.

The work authorization supports the loading order of efficiency and demand response,

the Governor's executive order to reduce overall electrical consumption and promote green buildings, and the demand response goals of the Energy Action Plan by developing new energy efficiency lighting systems and controls.

This contract has direct benefits to California. By making slight modifications to lighting products developed under the lighting research program new energy savings will flow from retooling products to save electricity in different market channels, or to speed the market acceptance of the products as follows:

Reworking the integrated classroom lighting system will reduce the lighting power density in office spaces. Reworking commercial office space task lighting technology will result in energy savings for the emerging small office/ home office market.

Further field testing and modifications to lighting technologies that combine LED lighting with traditional lighting will grow the market penetration for hybrid lighting systems. Redesigning wall pack and perimeter luminaires for bi-level operation will enable energy savings from smart parking lot lighting systems.

And adding new capabilities to the SPOT sensor placement software will expand its market acceptance as a tool for daylight harvesting.

These projects have potential to save as much as 200 gigawatt hours per year and 33 megawatts of peak demand.

The projects were developed after consultation with the California IOUs whose emerging technology program requires a steady stream of new energy efficiency lighting technologies to test and demonstrate.

Lighting companies and the savings by design program have already committed 308,000 of matching funds and are expected to increase that amount.

The majority of the work tasks will be performed by the California Lighting Technology Center at UC Davis. The Center was established jointly by PIER and UC Davis in 2004 to conduct cooperative and independent activities with lighting manufacturers, electric utilities and the design and engineering professional communities.

The Center's in the forefront of lighting research and development. Among the innovative lighting products already produced by

CLTC are hotel bathroom control switch and smart vanity light fixture; a kitchen compact fluorescent downlighting system; and a hybrid LED outdoor light. These products are now all commercially available.

The CLTC works with the electrical utilities and conducts field demonstrations to speed market adoption. The Center also works with manufacturers to enhance the energy efficiency of their products.

The work of the CLTC has been well received by industry and the research community. Industry partners thus far on this work authorization include FineLight Corporation, FullSpectrum Lighting, and the WattStopper.

Architectural Energy Corporation will be assisting CLTC to develop new capabilities for the SPOT software tool first produced by the lighting research program. The initial version of the tool won two prestigious awards at the 2004 Light Fair Conference. It has since been endorsed by the Northwest Energy Efficiency Alliance, and is supported by PG&E and Southern California Edison.

However, the utilities have requested the tool be redesigned to provide extensive new

capabilities. The reworking is included in this work authorization. The Alliance and PG&E are partners in that effort.

The work authorization has received approval from the R&D Committee and it's recommended that the Commission approve it. I'm happy to answer your questions on this proposed work authorization.

CHAIRPERSON DESMOND: Commissioner Rosenfeld.

COMMISSIONER ROSENFELD: I think you made a very convincing case. I think the Lighting Technology Center is doing just what it was created to do. And I move the item.

COMMISSIONER GEESMAN: Second.

CHAIRPERSON DESMOND: Okay. That's Mr. Siminovich, correct?

COMMISSIONER ROSENFELD: Correct.

CHAIRPERSON DESMOND: Okay.

COMMISSIONER ROSENFELD: The energetic Mr. Siminovich.

CHAIRPERSON DESMOND: Yes. Well, at some point in the future I'd be very interesting in hearing the commercial success rate of those products that have made their way into the market.

But very exciting news.

So, all those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you.

Agenda item number 9, the Energy Center of Wisconsin. Possible approval of contract 500-05-024 for $338,000 with the Energy Center of Wisconsin, an administrative agency for Association of State Energy and Technology Transfer Institutions to develop nationally accepted performance testing and reporting protocols. This project will also design a publicly searchable database for distributed generation systems with an emphasis on combined heat and power applications. Ms. Thompson.

MS. THOMPSON: Good morning, Commissioners. My name is Terry Thompson with the PIER -- program. This project addresses the need to encourage the development of environmentally sound distributed generation, combined heat and power resources per the Energy Action Plan 2005.

This project will result in the finalization of the interim performance testing and reporting protocols for distributed generation

developed in phase one; the development of interim performance testing and reporting protocols for fuel cells; and the continued development of the associated publicly searchable database for distributed generation.

The database located at www.dgdata.org will be the one-stop shop for nationally accepted distributed generation performance testing and reported protocols. And will hold accurate and unbiased performance data.

During the month of December the database had 205 visits in which 80 visitors downloaded the interim protocols.

The project is proposed to be funded at 338,000 over a period of three years. Co-funded in the amount of 919,000 has been committed by multiple state and federal partners. The 338,000 will be funded out of the 2005 PIER electric program budget of 1,400,000.

I am recommending that this project be adopted. I am happy to answer any questions on the proposed project.

CHAIRPERSON DESMOND: Thank you. Commissioner Rosenfeld.

COMMISSIONER ROSENFELD: I move the

item.

COMMISSIONER GEESMAN: Second.

CHAIRPERSON DESMOND: Commissioner Pfannenstiel.

VICE CHAIRPERSON PFANNENSTIEL: Just really one fundamental question. This is a three-year project; is the expectation that at the end of those three years this database will be up, available and fully useful? Or is it expected that there will be follow-on funding?

MS. THOMPSON: Currently this project, the database, is up and available. What this phase of the project will do is finalize the interim protocols and develop new protocols for the fuel cells.

So it will be up and available to the general public; it currently is.

VICE CHAIRPERSON PFANNENSTIEL: But this is going to add information to that --

MS. THOMPSON: Correct.

VICE CHAIRPERSON PFANNENSTIEL: -- and so the question is at the end of three years will there be additional follow-on work would you anticipate?

MS. THOMPSON: I anticipate that there

would be additional follow-up work in that the interim protocols for fuel cells that will be developed in this particular phase of the project will need to be finalized.

VICE CHAIRPERSON PFANNENSTIEL: Thanks.

CHAIRPERSON DESMOND: Thank you.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved.

Agenda item number 10, American Energy Assets. Possible approval of contract 500-02-025 for $700,000 with American Energy Assets to demonstrate high temperature solar collectors for industrial process heat in an industrial setting. Mr. Lozano.

MR. LOZANO: Good morning, Commissioners. CEC Contract Manager Mike Lozano.

This item is for $700,000 with American Energy Assets to demonstrate high temperature solar collectors providing high quality steam and water at temperatures up to 350 degrees Fahrenheit.

The 1.25 acres of solar collectors installed over four acres of land at a FritoLay

facility in Modesto will replace 19 million Btus per year of natural gas, and save the facility roughly 30 percent of natural gas used per year.

The total project cost is $1,695,000. The remaining funds of 995,000 are being contributed by FritoLay. The project should be completed by July '06. Followed by five years of monitoring.

The project focuses on energy efficiency and environmental issues; provides a high leverage for PIER natural gas funds; demonstrates industry viability and new design features; and reduces natural gas use and associated emissions in a severely affected area of the Central Valley.

The 2000 year, fiscal year natural gas RD&D budget is 12 million; 1.3 million allocated to renewable natural gas projects. Slightly less than 600,000 approved by the Commission December 2005 for a companion solar project with UC Merced. Upon approval the renewable and natural gas RD&D budget will be fully encumbered.

We recommend that the Committee approve this item. I will take questions now.

CHAIRPERSON DESMOND: Thank you. Commissioner Rosenfeld.

COMMISSIONER ROSENFELD: I move the item.

COMMISSIONER GEESMAN: Second.

CHAIRPERSON DESMOND: This is a very exciting project; very exciting under the PIER.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you.

MR. LOZANO: Thank you.

CHAIRPERSON DESMOND: Look forward to hearing more about that.

Agenda item number 11, which is the U.S. Department of Energy National Renewable Energy Laboratory. Possible approval of contract 500-05-027 for $2.5 million with the U.S. Department of Energy's National Renewable Energy Laboratory to develop modular architecture for distributed energy power electronics that will be cheaper and more reliable. Standardized electrical interfaces, connections and communications systems are required to achieve a universal plug-and-play environment for interconnection that benefits the customer and the utility grid. Mr. Rawson.

MR. RAWSON: Good morning,

Commissioners, thank you. My name's Mark Rawson; I'm the Team Lead for PIER's Energy Systems Integration program.

The research project that we're bringing to you today is part of the DER integration R&D program which is part of ESI.

This particular project was identified in our research plan and our research assessment and technology roadmaps principally focused at the issue of interconnection and the cost of interconnection.

And the principal focus of this project is to reduce cost and improve the functionality of interconnection systems through the application of advanced power electronics technologies.

Today power electronics components used in DG systems tend to be specialized designs that are custom engineered for each particular DG system. This tends to result in higher initial capital costs and recurring costs for maintenance and repairs of these power electronic systems.

In some cases the power electronics component of a DG package from a capital cost perspective can be as high as 45 percent of the total capital cost of the DG system.

This particular project is going to try to address that particular issue through trying to standardize the electrical interfaces and connections and communications that are needed to really make DG systems universal and plug-and-play as it relates to integration with the utilities' distribution system.

With standardized cross DG system capability, we feel that we can significantly reduce the cost of this particular high cost item in DG applications.

This new initiative that we're embarking on with the National Renewable Energy Laboratory is envisioned as a six-year activity that will be accorded activity to develop modular architectures for standardized, highly integrated and modularized power electronics interconnection technologies. With an end goal of trying to develop national standards and guidelines on how to develop classes of power electronic systems for DG technologies that can be applied across different technology types such as microturbines, engines, wind turbines, fuel cells and photovoltaic systems.

In this first contract for $2.5 million

we will be doing initial research planning with NREL and developing models to model these power electronic interfaces and their interactions with the utility system.

We will also be using NREL to assist the Energy Commission in a competitive solicitation to the DG and power electronics industries to develop the next generation of power electronic interfaces for DG systems.

In subsequent years the Department of Energy has expressed a strong interest in collaborating with the Energy Commission on this particular subject area, because they, too, see the ability to reduce the total cost of DG systems through this particular strategy.

If you have any questions I'd be happy to answer them.

COMMISSIONER ROSENFELD: I move the item.

COMMISSIONER GEESMAN: Second.

CHAIRPERSON DESMOND: Okay. Just a brief question, Mark, before we do this. There's a lot going on on standards in a number of different forums. There's gridwise alliance, the gridwise architecture council, EPRI's intelligrid

effort. I ran into SAIC the other day, who mentioned a new effort to develop some standards.

And I just want to make sure that we are interfacing with those relative standards bodies of those efforts in the project development here. So, I think it's built in, but it wasn't clear to me in reviewing the task list that, in fact, that's an explicit. But perhaps I just read it differently.

MR. RAWSON: Very much so. The standards that I referenced and that are in the package have to do with standards relating to the electrical interconnection of DG systems to the utility systems. So those tend to be IEEE 1547, which is the national standard.

The standards work that you're referring to that's occurring in some of these other venues, such as USDOE's gridwise or EPRI intelligrid, are focused on the communications and controls systems standards. And we are very much plugged into that work principally through our demand response research activities.

But we are leveraging what we're doing in the communication control area to make sure that what we develop in the DG area is compatible

with the communication standards that you're referring to.

CHAIRPERSON DESMOND: Great, thank you very much.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you, Mr. Rawson.

MR. RAWSON: Thank you.

CHAIRPERSON DESMOND: Item number 12, Gas Technology Institute. Possible approval of contract 500-05-026 for $3 million with the Gas Technology Institute to investigate the potential safety, performance, emissions and air quality impacts of increased variety of natural gas delivered in California. Ms. Mueller.

MS. MUELLER: Good morning; I'm Marla Mueller and I work in the PIER environmental program.

The California 2003 Integrated Energy Policy Report states that it's paramount that California continues to develop nontraditional supply sources such as liquified natural gas. The 2004 Integrated Energy Policy Report called for an examination of gas quality.

A liquified natural gas facility is being constructed in Mexico; and liquified natural gas from this facility will be imported into California. The liquified natural gas will differ in composition and properties from conventional natural gas. Natural gas combustion devices are designed and are tuned for current natural gas formulations.

Interchangeability, which is the ability of natural gas devices to operate on varying fuel formulations is of concern. More information is needed on the environmental impacts, energy efficiency, safety and performance of new supplies of natural gas.

Tests have indicated that natural gas with higher ethane and propane may produce higher emissions of oxides of nitrogen, or NOx, a precursor to ozone.

As you know, much of California is already in noncompliance with federal standards and state standards for ozone. And the California Air Resources Board and air districts are spending considerable resources to find ways to reduce ozone pollution.

Increases in oxides of nitrogen,

emissions from existing sources will exacerbate this problem. In addition, tests have indicated that under normal operation natural gas pollution from the use of appliances in homes can exceed the guidelines for indoor air quality.

Also standards for natural gas in California are currently under review. Data collected from this project can provide information needed to develop new standards. Too stringent standards may limit the supply of liquified natural gas; too lax may adversely impact human health and safety of the citizens of California.

This phase of the program will specifically look at interchangeability of commercial industrial burners and home appliances. Parameters needed to evaluate the interchangeability of liquified natural gas will be tested including looking at air quality impacts.

We are coordinating this work with the stakeholders such as the California Air Resources Board, the South Coast Air Quality Management District, the Federal Environmental Protection Agency, gas suppliers, gas distributors and

manufacturers.

We are requesting $3 million of natural gas funds for this phase for a contract with the Gas Technology Institute to evaluate the potential safety, performance, emissions and air quality impacts of the range of natural gas compositions that may be delivered to California.

Thank you.

CHAIRPERSON DESMOND: Thank you. A very timely issue in light of all the proposal that we have.

COMMISSIONER BOYD: Mr. Chairman, a question.

CHAIRPERSON DESMOND: Commissioner Boyd.

COMMISSIONER BOYD: Marla, you're writeup did reference the California domestic gas supply and also referenced back to PUC, and the CEC has been working on this gas quality issue for some time.

As you know, the domestic gas supply issue and gas quality related thereto has been a subject of discussion, if not downright debate, for a decade.

Will this contract, which seems heavily slanted towards LNG, and that's the thousand-pound

gorilla now, still shed light on the long-term issue that we've been seeking resolution to of the variability of California's domestic gas supplies, as well?

MS. MUELLER: Yes. We do expect to look at the range from domestic supplies to what LNG might be.

COMMISSIONER BOYD: Okay, thank you.

MS. MUELLER: Um-hum.

COMMISSIONER GEESMAN: I have a question, Mr. Chairman.

CHAIRPERSON DESMOND: Commissioner Geesman, go ahead.

COMMISSIONER GEESMAN: I want to make certain that this effort is adequately coordinated with both the activities of our own Natural Gas Committee, but also the quality standards effort underway between our natural gas staff and the CPUC.

And I guess the concern that I would raise is that if this is a three-year contract, we've just created a rationale for no action on those quality standards for the next three years. Can you --

COMMISSIONER ROSENFELD: Essentially

four years, it's 49 months.

COMMISSIONER GEESMAN: Can somebody assure me that that's not what's likely to happen?

MS. MUELLER: We made it for four years to give us plenty of time. But our intention is to do it as fast as possible, and to coordinate with the groups as we move through the process. We are actually developing right now a technical advisory committee and we'll have a stakeholders group, also.

We will be providing information as we move through the program. We will not wait until we are the end to provide all the information.

COMMISSIONER GEESMAN: Commissioner Boyd, is this something that the Natural Gas Committee has orchestrated?

COMMISSIONER BOYD: I share your concern, and I fear that -- well, the parties have been trying for years to come to agreement. And the only agreement that made of late is more research is needed.

I do share your fear that the larger issue of LNG gas quality, which isn't the immediate issue because we won't have a delivery for several years, will swamp and delay the

decades-old effort to resolve the gas quality concerns related to our own domestic gas supply.

But everybody in both of our staffs in the natural gas office, as well as in the research and development, as well as the folks at the PUC, everyone has been supportive of the idea we need this research.

So, I'm afraid the answer is we need the research, and it's a pretty safe bet we're not going to get resolution of the question affecting our domestic supplies much sooner. And that's an unfortunate tragedy which I forecast when the LNG gorilla walked in the room. But that's unfortunate, but true.

COMMISSIONER ROSENFELD: Commissioner Boyd, you can officially urge -- you both can officially urge Marla right now to put a very high priority on the existing problem.

COMMISSIONER BOYD: Marla knows that. But I appreciate you making it a public revelation. So, yes. And our gas staff is well -- Marla has worked very closely with our natural gas staff on this particular issue, so everybody's cognizant of the dilemma.

But I will continue to urge to the last

day I work here.

MS. MUELLER: And I will mention here that we've had people from the industry that have actually started the literature review on this project, so that when we get this funded we are that much closer to actually starting the research, itself, and not just the literature review. So we've had a lot of support to try to move this as fast as we can.

CHAIRPERSON DESMOND: Thank you.

COMMISSIONER ROSENFELD: I move the item.

COMMISSIONER GEESMAN: I second it reluctantly. I'll defer to Commissioner Boyd's judgment on this, but I'm concerned about continuing delay here. But I do second it.

CHAIRPERSON DESMOND: All those in favor?

(Ayes.)

COMMISSIONER GEESMAN: Reluctantly.

CHAIRPERSON DESMOND: Opposed? So moved. I think the message is clear, Ms. Mueller.

Next on the agenda we have items 13, 14, 15, and 16, which are part of the West Coast Regional Carbon Sequestration Partnership,

WESTCARB, as it's otherwise known, phase two. The U.S. Department of Energy, DOE, Fossil Energy, which is FE, is providing $10,747,729 of the $14,076,338 in funding. And the partnership will demonstrate the feasibility of forest and geologic sequestration in Arizona, California, Oregon, Washington and Alaska, through regional assessments and pilot demonstration projects.

Item number 13 is with the California Department of Conservation. Possible approval of contract 500-05-028 for $150,000 as part of a cooperative agreement with the USDOE, FE and WESTCARB.

Agenda item number 14 is with the California Department of Forestry and Fire Protection. Possible approval of contract 500-05-029 for $200,000 as part of a cooperative agreement with the USDOE, FE and WESTCARB, providing staff data to support the development of fire models and market validation of forest sequestration credits and studies of conversion open land into forest, afforestation, using natural species.

Number 15 is with EPRI. Possible approval of contract 500-05-030 for $3,654,915 as

part of a cooperative agreement with the U.S. Department of Energy, Fossil Energy and WESTCARB.

And item 16 is with the California Institute of Energy and the Environment. Possible approval of contract -- of work authorization number MR-045 under PIER contract 500-02-004 for $10,071,422 as part of a cooperative agreement with the U.S. Department of Energy, Fossil Energy and the WESTCARB. And that there is PIER funding of $2,978,609.

So, we'll take these as a group. If you'll address sort of as an overview and then walk through each of the individual items. Go ahead.

MR. MYER: Good morning, Commissioners. My name is Larry Myer from the PIER environmental program. I'm the Technical Director for the WESTCARB project. The WESTCARB project stands for West Coast Regional Carbon Sequestration Partnership.

The overall objective of this partnership is to assess carbon dioxide sequestration options in California and the west coast states, including Arizona, California, Nevada, Oregon, Washington, Alaska and British

Columbia.

PIER leads the WESTCARB effort; and the WESTCARB is one of seven regional partnerships established by the DOE to assess sequestration opportunities across the United States.

The WESTCARB partnership includes participation by 70 organizations representing broad stakeholder involvement in the project.

The project has been underway for approximately two years now. As a result of the first two years of activities which addressed opportunities broadly over the region, we can say that California offers very significant opportunities for carbon sequestration, both in the terrestrial sector and in the subsurface.

For example, we have identified the afforestation represents a major sequestration opportunity in the terrestrial sector. And, in particular, afforestation of grazing lands. For example, for less than $20 a metric ton of CO2 over 3 gigatons of carbon dioxide could be sequestered over 20 million acres in California over the next 40 years.

In addition to afforestation as a major opportunity for sequestering large quantities of

CO2, in phase one we identified that fire management is another opportunity that we should address. While the sequestration opportunities for fire management are more modest, there are significant cobenefits to fire management that we thought deserved focus in our phase two program on sequestration.

In the geologic part of the program we can again say that California offers very significant opportunities for sequestration of carbon dioxide in deep subsurface formations. Both in formations which are saturated by saline fluids and in depleted gas reservoirs and in oil reservoirs. And in the oil reservoirs there are opportunities for using the carbon dioxide not just for storage, but for enhanced oil recovery.

In the Central Valley alone the total saline formation storage capacity is on the order of 70 to 400 gigatons, a very large quantity. The cost, however, for geologic sequestration, if we compare costs with terrestrial sequestration, are significantly greater. The cost of geologic sequestration, if we are to retrofit existing power plants, which would be major point sources of CO2 for sequestration, would be on the order of

$40 per ton CO2 in California.

So, based on the results of this phase one effort, in phase two we are going to focus on efforts on the prime opportunities for sequestration. So we are going to continue our regional assessment, but a large part of the program focuses on pilots which are representative of the best sequestration options, unique technologies and approaches in the region.

The geologic pilots, of which there are two locations in which we will inject CO2, one near Rio Vista, California, in a depleted gas reservoir, and one in northern Arizona. Offer the opportunity, not only to test technologies, but to further assess capacity for storage; assess the costs, the real costs, because we will be doing pilots, assessing leakage loss of potential leakage risks; gauging public acceptance; testing the regulatory requirements; and validation of monitoring methods.

In addition to two sites in which we will inject CO2 in the subsurface, we will conduct in-depth site investigations of two other locations, one near Centralia, Washington, and one at the Clean Energy Systems demonstration plant in

Kimberlina, California.

The phase two terrestrial sequestration pilot options are to validate afforestation potential for rangelands; develop and implement methodologies for determining credits for reducing emissions from uncharacteristically severe fires; and to implement a project to reduce emissions through conservation and sustainable management of forest lands.

We'll conduct these pilots in two locations. One in Shasta County, California, and one in Lake County, Oregon.

So, with that overview, I will step through the individual contracts associated with this just to give some more detail on what each one of them constitutes.

Item 13 is the California Department of Conservation. They will continue to do studies of the opportunities for sequestration in the subsurface geology in California, focusing on particular formations which would be applicable for sequestration. In their phase one studies they did a broadbrush assessment of the geologic formations. They will now focus on the specific formations that are most promising, collecting

additional data on the properties of these formations and the aerial extent of the formations.

Item 14 is the California Department of Forestry and Fire Protection. There's two specific goals of their interagency agreement, this interagency agreement. The first is to conduct a reforestation project in LaTour Forest that becomes successfully registered with the California Climate Action Registry. So we will exercise the protocols that the California Climate Action Registry has developed for crediting forest actions.

And the second thing to be conducted by CDF is to conduct a fuel treatment project also in LaTour, that serves as the basis for customizing the University of Washington's landscape management system, and CDF's fire resource assessment program.

In addition, I should say that the data collected from both of these activities will serve to be used in the overall terrestrial program in phase two to meet the objections of validation of forest growth, types for rangelands, and the development and testing of fuel management

activities baselines and development of measurement and monitoring approaches.

Third item is a contract with -- which is item 15, Electric Power Research Institute. There are three major activities that are going to occur within this contract.

The first is to continue an activity to assess the costs of transporting and sequestering carbon dioxide from the specific point sources that we have in the region. We call this activity a source sink matching operation in which you evaluate first the cost of capture, then the cost of transport, and then finally the cost of injection into the subsurface.

The second activity is to continue to work on the economics and technology associated with capture of carbon dioxide and industrial point sources.

The cost of capture continues to be the major cost element in geologic sequestration, and a major impediment to commercialization of the technology.

So, this study will continue to look at the costs of the -- at specific plant locations in the region to better define what those costs would

be. We will continue to look at advanced technologies which might be applicable for in this region for capture.

The last activity in the EPRI contract is to conduct a pilot geologic sequestration test in northern Arizona. This will be a greenfield test in which, and conducted with the Salt River Project through the EPRI tailored collaborative program.

We will drill an exploration well to depth; test the formations for their suitability for carbon storage; and then inject carbon into the formation, implementing a monitoring program to evaluate where the CO2 is going and what its fate is.

These will only be conducted after we have completed the necessary permitting and environmental assessments.

The last element, which is item 16, is a work authorization for the California Institute for Energy and Environment, and includes several parts. One of the work elements here is to continue the geologic characterization of the region with further work in Oregon and Washington and Alaska and Nevada.

Another substantial element of the CIEE work authorization is to conduct terrestrial sequestration studies, and in particular to conduct a Shasta County pilot with the objectives of validation of forest growth type, further work on fuel management activities, and also this project to evaluate emissions reductions from conservation.

This work will also address and fund work in a Lake County pilot in Oregon. This Lake County pilot is part of the Oregon Solutions program, and will also address fuel management activities, as well as afforestation.

And the final part of the California Institute for Energy Environment work authorization is to carry out a geologic pilot test near Rio Vista in which we will inject CO2 into a depleted gas reservoir and saline formation. This involves drilling two wells into the subsurface, characterization, injection, and monitoring. Once again, only to be conducted after we've taken all permits and completed all environmental assessments.

So with that, I just summarize that we have -- that we're asking for approval for this

group of contracts which constitute phase two.

And I also have an amendment to item 16, which I'd like to bring forward at the advice of the Chief Counsel, staff recommends adding the following language to the work authorization with CIEE, that neither the contractor nor any subcontractor are authorized to expend funds for surface preparation, drilling, well modification or injection of CO2 until the Energy Commission so authorizes, following preparation of a negative declaration or an environmental impact report.

So, thank you, and I'll answer any questions.

COMMISSIONER BOYD: Mr. Chairman, question.

CHAIRPERSON DESMOND: Commissioner Boyd.

COMMISSIONER BOYD: Larry, in your introductory remarks and in the earlier discussions we've had within this agency on sequestration, geologic sequestration in particular, you mentioned and we've talked before about CO2 for enhanced oil recovery.

And in the early stages of this project there were a lot of discussions with people in the San Joaquin Valley about conducting

experimentation there for that one purpose. And nationally and internationally almost everybody who talks about CO2 sequestration these days ties it to the possibilities of enhanced oil recovery in order to take advantage of the economic benefit you gain there. Most of the activities just involved paying a fee to put it in the ground to leave it there. This is something where people actually pay for the product in order to help enhance the recovery of oil.

And I notice we're not doing any of that work. Is that because there's been plenty of work on that subject and it's proven feasible? In fact, it's being used in some parts of the North American continent. Or is there some other reasons why we didn't explore that any further?

MR. MYER: Yes. One of the reasons is that there is plenty of work going on in enhanced oil recovery. And the other partnerships are covering a number of projects associated with enhanced oil recovery.

We're certainly not adverse to doing an enhanced oil recovery project in California. It so happens that the projects, the pilot projects which had been considered and are underway didn't

match and schedule with our phase two project. And we weren't able to include them in our project.

In addition, it also gave us some opportunity to explore some options that other partnerships are not. The injection into the enhanced gas -- into the depleted gas reservoir offers us the opportunity to look at the technology of enhanced gas recovery. And this is particularly applicable in the northern Sacramento Valley where there are a very large number of gas fields.

This is a new technology, so this is -- and it hasn't been commercially explored. It's also something that none of the other partnerships are doing. So, part of our rationale was to do projects which would be somewhat unique, as well, to the U.S. program.

COMMISSIONER BOYD: Thank you.

VICE CHAIRPERSON PFANNENSTIEL: Mr. Chairman, couple questions.

CHAIRPERSON DESMOND: Commissioner Pfannenstiel.

VICE CHAIRPERSON PFANNENSTIEL: First, I note that the result of all of this will be a

series of reports; and we will have spent -- we being the Energy Commission and Department of Energy for the most part -- something like $24 million on a series of reports.

When will they be available? When do we look at the results of this? It's clearly important and it's clearly critically urgent in terms of the timeliness of it.

MR. MYER: The final reports are not due until the conclusion of the program four years hence. We intend to make information available throughout the program as quickly as we can. We have a website, and what we do is to post information as we feel that we can make it public.

And so I think the answer is that, yes, final reports are in four years hence. We will be doing quarterly reports. We often post presentations; we post papers and reports that are prepared in the interim. So there will be information coming out throughout the four years on this project.

VICE CHAIRPERSON PFANNENSTIEL: The Energy Commission is the project manager for the full scope of the effort, the $24.3 million effort, that's correct?

MR. MYER: That is correct.

VICE CHAIRPERSON PFANNENSTIEL: I just went through and I was trying to divide up between what dollars were coming in from DOE, what dollars were coming from PIER, where the dollars are flowing out to. And as nearly as I can tell the four projects that we have in front of us now, three of them involve PIER dollars. And one of them involves -- the one that's EPRI is just DOE dollars, right? But the one that goes CIEE is partly PIER, partly EPRI and the other two are just -- I mean partly DOE, partly PIER and then the first two were just PIER, is that correct?

MR. MYER: That is correct.

VICE CHAIRPERSON PFANNENSTIEL: I was trying to just trace the dollars through.

MR. MYER: Yes, that is correct.

VICE CHAIRPERSON PFANNENSTIEL: But we are the project manager of the whole thing?

MR. MYER: We are the project manager of the whole thing.

VICE CHAIRPERSON PFANNENSTIEL: Okay, thank you. I understand now.

CHAIRPERSON DESMOND: Okay, thank you. Any further comments? I want to just note that

Mr. Bud Hoekstra has filed public comments on item number 14 as it related to the California Department of Forestry and Fire Protection. I would note that the copy distributed on the front for the public here, I believe is missing the second page. Because if I read the paragraph at the bottom of the first, it reads: The 2-2 is available for -- and then continues to a third paragraph.

So I believe that we're missing the middle page, but I would point out that Mr. Hoekstra has taken the time to cite considerable references noting the role of both fireproof construction and the role of natural species, emphasizing natural gene pools of species.

So I hope that those comments are taken into consideration in shaping the work plan. They seem fairly relevant.

MR. MYER: We intend to take these into consideration.

CHAIRPERSON DESMOND: Great, thank you. Commissioner Rosenfeld.

COMMISSIONER ROSENFELD: I'm ready to move the item.

COMMISSIONER GEESMAN: Second.

CHAIRPERSON DESMOND: All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you very much.

Okay, that takes care of collectively items 13, 14, 15 and 16.

Item number 17 is the Blythe Project Phase II. Consideration and possible action on intervenor Carmela Garnica's petition for the reconsideration of the Energy Commission decision certifying the Blythe Energy Project Phase II near the City of Blythe.

Mr. Shean.

MR. SHEAN: Good morning, Mr. Chairman and Commissioners. On December 14th the Commission adopted the Committee's PMPD and errata, thus certifying the Blythe II project.

On January 13th intervenor Carmela Garnica filed a timely petition for reconsideration. She has also filed two other documents in the proceeding in the relevant timeframe.

On December 19th she filed a document entitled demand to correct or cure violations of

the Bagley-Keene Open Meeting Act.

And then on January 23rd she filed a request for continuance of the hearing on the reconsideration. By order from the Chairman, that request for continuance was denied, indicating that the hearing would be held today, and that any substantive issue included in her request for continuance would be considered today.

We have here today Mr. Sarvey, who has been designated as a representative by Ms. Garnica. I'm not aware that she is on the telephone. We do have the notice of this proceeding out to all parties with the teleconference number.

My suggestion at this point is that as the moving party with the burden of proof, that Mr. Sarvey make his remarks. There are, as far as I know, no written remarks from the applicant, who is present. The staff has filed an extensive brief covering all three of the pleadings by Ms. Garnica. And if you have questions after that I'll be happy to answer them.

CHAIRPERSON DESMOND: Thank you. Comments, Commissioners, or questions? Does staff wish to provide any additional comments before we

move to Mr. Sarvey?

Okay, Mr. Sarvey, like to comment?

MR. SARVEY: Right now?

CHAIRPERSON DESMOND: There's no further questions.

MR. SARVEY: I'd like to deal with the issues one-by-one.

CHAIRPERSON DESMOND: Please. Thank you.

MR. SARVEY: The first issue is the ammonia issue. And I'd like to start off by reading from the Blythe I PMPD page 153, item 4: Implementation of the mitigation measures described in the evidentiary record and contained in the conditions of certification below insure that the project will not cause significant impacts to public health and safety as a result of handling hazardous materials."

Now, why that is significant is explained by the handout that I have given you, which is a newspaper article about a incident on September 30, 2004 at the Blythe I project, where they had a anhydrous ammonia incident which closed down highway 10 in both directions for a 50-mile stretch for over five hours.

And I'd like to say that we appreciate that the decision encourages the applicant to use something other than anhydrous ammonia as refrigerant. But we believe that judging by what happened in Blythe I that anhydrous ammonia should be taken off the table completely. We're looking for a condition that says such.

And the second thing that I've attached in my handout to you is a readout from the EPA Echo site, which lists the Blythe I project as a significant and chronic violator of its conditions of certification. And that's from the Echo website from the EPA.

And they're a high priority, significant violator. So we feel that there's issues at that plant. We'd like to see anhydrous ammonia taken off the table as a refrigerant. And that's our position.

CHAIRPERSON DESMOND: Comments or response from -- go ahead.

MR. GALATI: Would you like to hear from staff first or the applicant?

CHAIRPERSON DESMOND: Yes, please.

MS. DeCARLO: Lisa DeCarlo, Staff Counsel. As far as the anhydrous ammonia issue we

responded to that in our comments filed on Monday. The incident that occurred was fully considered by the Committee and by staff, analyzed in the FSA, and in the PMPD and Commission decision.

It wasn't an actual leak of anhydrous ammonia that transported to I-10. It was merely a leak in the building that was fully contained. There was a problem with the ability to monitor to determine whether the leak actually occurred outside the building. Those problems have been rectified in proposed changes to the conditions of certification that the Commission fully adopted in Blythe II.

CHAIRPERSON DESMOND: Thank you. And the applicant, please.

MR. GALATI: Scott Galati representing Caithness Blythe II. First and foremost, Blythe I and Blythe II are two separate owners. Second, in the evidentiary hearings we discussed at length what happened in Blythe I and at workshops, and came up with conditions of certification for Blythe II that were more stringent and addressed specifically the monitoring and early monitoring to detect an issue that caused the Blythe I project to shut down I-10 out of an abundance of

caution, not because there was the leak.

So, one, I would say that Blythe I did not result in a significant impact. And Blythe II is insured to have additional monitoring requirement to insure that I-10 wouldn't be shut down in a similar circumstance.

CHAIRPERSON DESMOND: Thank you. Next issue.

MR. SARVEY: Can I just respond briefly to that?

CHAIRPERSON DESMOND: Please.

MR. SARVEY: What happened in Blythe I essentially a worker, according to the information that I have, a worker opened the wrong valve, which is a human error situation. And I don't see any way of preventing human errors. And we thought we had a good decision in Blythe I; turned out perhaps we missed a few things.

So I really think the only way to take this issue off the table, and I do believe that was a significant impact, closing highway 10 for five hours each way, and taking 90 minutes for the hazmat team to respond. I believe that is a significant impact, and that warrants taking the anhydrous ammonia off the table here.

And once again, like I said, I appreciate that the decision is going to encourage the applicant to do so.

The second issue that we have is we don't believe that the road-paving credits CEQA efficacy should be left to the Mojave Air District and the EPA. Presently the Mojave Air District has not provided a valid FDOC because it's violated two of its own regulations, 1305(d) and 1402(b).

USEPA noted that the District must provide public notice of valid ERCs before issuing the FDOC. The road-paving credits at this time have not been subject to public notice, and we believe under these circumstances with an invalid FDOC that the Commission has not met the requirements of section 1744.5(b).

We therefore have three LORS violations in the decision.

CHAIRPERSON DESMOND: Does staff wish to respond?

MS. DeCARLO: This issue came up shortly before the adoption of the Commission decision; and the Committee did hold a hearing on the 13th to discuss specifically this issue.

EPA was involved. We decided to alter several conditions of certification to insure that EPA was a party to the determination of whether offsets were satisfactory. This is not a CEQA issue, per se. The Commission has fully determined that the conditions of certification, as they stand now, will insure that the project will not result in any significant impacts.

And there is a process set in motion that complies, follows the conditions of certification that'll insure that the LORS will be complied with.

CHAIRPERSON DESMOND: Does the applicant wish to respond, as well?

MR. GALATI: Yes, please. In addition to what Ms. DeCarlo said, I'd like to point out that there is a significant difference between deferring mitigation, which Mr. Sarvey has claimed is being done, versus requiring additional performance standards, which is what was done.

The applicant must offset and must provide valid ERCs for that offsetting. So, in effect, what is happening is mitigation is being specified. But the performance criterias that those ERCs must meet are identified in Mojave

Desert. And it's the performance criteria that has been altered with an additional step for EPA approval.

So, it is effective mitigation; it's been done in other projects. We'd ask that you deny that request, as well.

MR. SARVEY: And then the last issue we have is the permanence of the road-paving credits. We realize road-paving credit has been used in other situation. In this particular instance these road-paving credits are on tribal land, which the Energy Commission and the Air District have absolutely no authority to insure that these roads stay paved.

If the tribe decides not to repave these roads after a period of time, and they deteriorate, then we don't have a permanent emission reduction for PM10. So that's another issue we'd like to see the Energy Commission put something in there to insure. I don't know how you do that, since this is on tribal land. We have no authority, how you're going to make that emission reduction permanent.

That's it.

CHAIRPERSON DESMOND: Thank you. Staff.

MS. DeCARLO: The conditions of certification require that EPA certify that they offsets used, including the road paving, are permanent, enforceable, real, verifiable. So that is inherent in the conditions of certification. It must be performed.

CHAIRPERSON DESMOND: Thank you.

MR. GALATI: In addition, to clarify, we had long discussions with staff about this and we provided that the contract with the Colorado River Indian Tribes requires the applicant to maintain all roads. And we assume also that that condition of certification, in order to show compliance with the condition, we would be reporting the maintenance of those roadways both to Mojave Desert and to the Energy Commission.

But we have a contract that requires us to maintain those roads.

CHAIRPERSON DESMOND: Thank you. Any further rebuttal comments? No.

Commissioner Geesman.

COMMISSIONER GEESMAN: Mr. Chairman, I've had Hearing Officer Shean draft an order that would respond to Ms. Garnica's several pleadings on this. And I believe Mr. Chamberlain's had an

opportunity to review it. But I'd like to reflect on it a bit after we take action. I will circulate a final draft to your offices this afternoon.

But to summarize, I would recommend that Ms. Garnica's petition for reconsideration of the decision be denied. I don't believe that her petition or anything that Mr. Sarvey has said here today would justify a reconsideration of our earlier decision.

I would also recommend that Ms. Garnica's request for a continuance and her demand to correct or cure violations of the Bagley-Keene Open Meeting Act do not support the reconsideration of the Commission's original decision. And that they also be denied. And I'll circulate a final draft of such an order, assuming that you agree with my motion, later this afternoon.

CHAIRPERSON DESMOND: Okay. Is there a second or further discussion?

VICE CHAIRPERSON PFANNENSTIEL: I'll second.

CHAIRPERSON DESMOND: Any additional discussion? We have a motion asking that we deny

the reconsideration on these three issues.

All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you.

Agenda item number 18, Committee assignments. Mr. Kennedy. I believe you're going to come up and discuss --

DR. KENNEDY: Yes, thank you.

CHAIRPERSON DESMOND: Oh, thank you, there you are. I'm looking for you in your chair.

DR. KENNEDY: Thank you, Mr. Chairman, Commissioners. I am very pleased to be here in my new capacity as Chairman Desmond's Advisor.

And what you have before you today, on this item, are two draft orders doing a periodic updating of the Committee assignments. The first relates to the standing policy committees, and I would just like to quickly review the changes from the previous order that had been adopted last June.

The only change in terms of Committee assignments would be the appointing of a new Committee for the next cycle of the Integrated Energy Policy Report. And the proposed Committee

for that would be Commissioner Pfannenstiel as Presiding Member, and Commissioner Geesman as Second Member.

There are also a number of issues where the particulars of some of the Committee responsibilities, the proposals to adjust a few of those. The first of those relates to an issue that came to some prominence during the course of the most recent IEPR. And that has to do with the intersection of the state's energy and water systems. And the recognition that there's a need within the committee structure to have some clear responsibility for which policy committee would be dealing with those sorts of issues.

While there had been some discussion of possibly creating a separate committee to deal with energy and water issues, the proposal before you would actually assign primary responsibility for that to the existing Efficiency Committee.

This is one of a number of areas where there's issues somewhat spread across policy areas, but it is useful to have a particular committee assigned as lead. And so that proposal would be to have that at the Efficiency Committee.

A similar issue is distributed

generation, which has a tendency to fall across a number of policy areas. In the previous order primary responsibility for DG issues had been assigned to the IEPR Committee. In the proposed order here, that responsibility would be assigned to the Renewables Committee with the recognition that that is both for renewable DG systems and nonrenewable DG systems.

Two other relatively minor clarifications in terms of responsibilities would be to make somewhat permanent what has been a bit of a practice on an ad hoc basis that the Siting Committee take responsibility for what I would call work on siting cases, ones that have been in suspension long enough that the Commissioners originally assigned to preside over the case actually are no longer on the Commission.

An example that actually is directly relevant at the moment is the Potrero siting case. So this order would have that become sort of a permanent understanding that the Siting Committee would take over responsibility for those while they remain in suspension.

Similarly, the R&D Committee description had specified that the R&D Committee was

overseeing nontransportation-related R&D. To the extent that the Energy Commission is now becoming more involved in transportation R&D, that restriction, as it were, is proposed to be removed from the description of that Committee, so that the RD Committee would handle transportation-related matters as well, R&D related matters.

Beyond that there is just some minor cleanup to some of the language.

The second order would relate to the siting case committee assignments. And primarily the changes there are to bring things up to date. When the last order was -- since the last order had been adopted last June, the Pastoria Expansion Project became data adequate, a committee was assigned. Earlier today committees were assigned for the two Mission Energy projects. And also, as we were just hearing, the Blythe II case, the decision has been made and the motion for reconsideration you just voted to deny, so the proposal is to drop Blythe II from this order, add the Pastoria and the two Mission Energy projects.

In addition, there's some minor cleanup having to do with the project managers assigned to particular cases, and some other minor items along

those lines.

So, those two draft orders are before you. In particular with the energy/water connection, that may be an issue that both the staff and the Commissioners want to keep an eye on over the next six months or a year to see whether or not the assignment of that issue to the Efficiency Committee is working out in terms of being able to keep tabs on the different things that are going on.

So those proposals are before you.

CHAIRPERSON DESMOND: Thank you, Kevin. Let me just add briefly to that. I think we should keep a close eye, in my mind there are sort of five general areas related to the intersection of water and energy that come to mind. Programmatic opportunities for efficiency and water audits and combining that to achieve our efficiency goals funding mechanisms, revolving loans that could be used for pump replacement and upgrades, R&D as it relates to optimization, and all sorts of technology evaluation opportunities.

Power development that doesn't quite fall into the category of efficiency; and that relates to either in conduit hydro, solar over the

aqueduct, or probably more to the point is the opportunities for pump storage as they exist.

And then lastly, codes and standards. Whether, I'd point to the clothes washer efficiency standard that we have as a pretty good example of how we could be doing that. So I think it does make sense, you know, that the majority of that does fall within the energy efficiency arena today, but we should keep a close eye and make sure that we have staff focused on this across several disciplines.

VICE CHAIRPERSON PFANNENSTIEL: Mr. Chairman, I will move the recommendations that we have before us on the committee assignments.

COMMISSIONER GEESMAN: Second.

COMMISSIONER ROSENFELD: I'd like to second -- oh, --

CHAIRPERSON DESMOND: All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved. Thank you, Kevin.

Item number 19, approval of the minutes of the January 18, 2006 business meeting.

COMMISSIONER ROSENFELD: I move the

minutes.

COMMISSIONER BOYD: Second.

CHAIRPERSON DESMOND: All those in favor?

(Ayes.)

CHAIRPERSON DESMOND: Opposed? So moved.

Item number 20, Commission Committee Presentations and Discussions. And I believe we have here today a presentation from Ryan Wiser on solar technologies. Is Mr. Wiser here?

(Pause.)

MR. WISER: This is getting off to a quick start, isn't it?

(Pause.)

MR. WISER: Well, while this is coming perhaps I should just start.

Certainly a pleasure to be here. My name is Ryan Wiser; I'm going to give a pretty brief, hopefully a pretty brief presentation of some recent work that I helped conduct at Lawrence Berkeley National Lab. Work that I think you'll find ends up being pretty darned timely, given recent decisions by the California Public Utilities Commission and this Commission, to

develop a more stable and longer term market for solar photovoltaic than historically existed.

I should note for those in the audience I believe there are hard copies of this presentation out in the foyer, which may be particularly helpful given the fact that some of these may be relatively hard to see on this small screen.

The report I'll be summarizing came out in final form just a couple of weeks ago. Its purpose was pretty darn simple, and that was to evaluate historical trends in photovoltaic installed costs here in California, focusing on systems that were installed by both the -- or funded by both the California Energy Commission and the California Public Utilities Commission.

I do want to make clear here that this work was conducted on behalf of the Department of Energy. It was not funded by or conducted for the California Energy Commission, though I certainly acknowledge and appreciate the assistance of staff to provide the data on which the document is based. And their review of earlier drafts of the work, as well.

This slide lists some of the major

questions that we were seeking to answer. I'm not going to go through all of them right now, but they include how have installed solar costs declined in California over time; to what extent do we see economies of scale in those costs; lower system costs with larger system sizes.

To what extent do we see some evidence that the design of the rebates, themselves, their size and design, have affected installed costs; including whether there are any significant differences between the installed costs of those systems funded by the CEC's program and the CPUC's programs.

Have changes in the state tax incentives affected the average system costs. And finally, are there significant variations in average system cost across different system types, residential retrofit markets versus those systems installed in new construction and affordable housing applications or in other applications.

In terms of data and methodology here, let me just go through these pretty quickly. The data came from the program databases provided by the CEC and CPUC. Those data were updated through May and June 2005 respectively, so the data are

now just a little bit dated.

The data include project-specific cost information for not just completed solar systems, but also those that have been approved for a rebate, as well as those in the PUC's data set that are weight-listed at the present time.

The statistical analysis that we performed was performed one each database separately, as well as a combined database of both sets of systems. And again, every case we were trying to understand were variations in the trends and installed system cost and nominated in dollar-per-watt terms with all data converted to 2004 real dollars.

Ultimately, our analysis included information on nearly 19,000 completed approved and weight-listed solar systems. Those systems total 254 megawatts of capacity; and the data include systems that applied for rebates from the inception of each program. March '98 for the CEC, July 2001 for the PUC, through April 2005.

This slide goes through a couple of the key findings. I think rather than belaboring these points here, let me instead launch into some of the key analysis results that I think will help

confirm each of these findings.

Before I do that, though, let me just say that I think in some sense the results that we came out with that I'll be presenting are not all going to be all together surprising, though we certainly hope that you'll find some elements of our results that offer new insight to California's solar market.

In some measure what we've really done, I think, is more definitively prove out some trends that many of us thought we saw in the data before, but didn't necessarily have definitive proof really existing.

So, let me go through each of the findings in turn. The first is that contrary to at least some popular belief we did find that solar PV costs here in California have declined over time. And, in fact, it declined rather substantially, especially among the smaller solar systems funded by the CEC's program.

In fact, over the entire duration of the CEC's program we see annual average cost reductions, again in real 2004 dollar terms, of roughly 70 cents per watt per year, or about a 7.3 percent annual average reduction in installed

costs.

Within the PUC's program we see aggregate reductions of roughly 35 cents per year, about 4 percent a year. You can also see in this figure that there's quite a lot of noise in the installed cost under the CPUC's program, especially for the first couple of years. It's really not until the last two years of the PUC's program that we see more steady declines in cost over time. And those cost reductions have largely tracked those seen under the CEC's program over the last couple of years.

Where do these costs come from? Well, I don't -- not going to walk through this slide in detail. It's a pretty messy slide, and some of you may not be able to see it particularly well, but the bottomline is that most of the cost reductions that we find, especially under the CEC's program, are coming from nonmodule costs. Installation labor costs, inverter costs and balance of system components.

And I think that finding, at least to me, is pretty darn encouraging. Ultimately California is not going to have much effect on the price of photovoltaic modules. Photovoltaic

module prices are set in a worldwide market.

Reductions in nonmodule costs, however, and we've seen again, significant reductions in those costs, especially under the CEC program, I think are a pretty good indication that installation efficiencies that come from a growing and maturing market have been in play here and have helped reduce costs over time.

And that contention is, to some degree, supported by the graph on the top here, which again many of you may not be able to see particularly well, but what that graph shows is that the distribution of system cost within the CEC's program has not only shifted to the left over time, shifted towards lower cost systems, but also has narrowed significantly.

So in the 1998 to 2000 timeframe, for example, we saw a pretty sizeable spread in installed system costs with a large number of higher cost outlyers.

In the 2004 and 2005 timeframe, on the other hand, that spread has narrowed considerably and the number of higher cost outlyers has also decreased.

And I think this suggests pretty clearly

that supply competition is far more robust today than it was at the onset of the program in the 1998 to 2000 timeframe.

The results that we come out with are not all rosy. There are some somewhat disconcerting results, as well. One of those, and this is perhaps not surprising, is that we find that the policy incentives and rebates that have been offered by the state have, at least to some degree, affected pre-rebate installed costs. And so we therefore conclude that heavy subsidies can, and at times have, here in California, affected the motivation of installers to provide lower costs to their customers, and customers to seek lower costs from their suppliers.

As I first noted on this slide, we see that the -- we find the pre-rebate installed PV cost within the CEC's program have tracked, to a certain degree, the CEC's incentive levels. And what that means, for example, is that when the CEC's rebates increased in the year 2001, at that time from $3 a watt to $4.50 a watt, that the system purchasers, the owners of these systems, really only realized a relatively small fraction of that rebate increase. A lot of that rebate

ended up being captured by system retailers and installers through higher prices at that time.

Now that finding is demonstrated to some degree visually by this particular graph; the gold bars represent total average cost of systems funded under the CEC program; the blue bars represent the standard rebate. And you can see that those two visually appear to have some relationship with one another. And our statistical analysis helped us prove that that visual relationship is, in fact, a real relationship on statistical grounds, as well.

To further illustrate the impact of incentive levels on pre-rebate installed costs, we also analyzed cost differences between the CEC's program and the CPUC's program. And that takes advantage of the fact that the PUC has, at least over the last several years, offered richer, more sizeable incentives than has the CEC's program for smaller incentives.

And we found that those differential incentives have affected system cost to some degree. Specifically if you look at systems that are of similar size, 20 to 40 kilowatts in size; and installed over a similar timeframe.

Those systems funded by the CPUC's program have come in at cost and are at least 60 cents per watt higher than similar systems funded by the CEC's program. So, again, pretty good indication that incentive levels have affected pre-rebate installed costs within the PUC's program relative to the CEC's program.

What's more we find some evidence that those PV systems that have been supported by the CPUC, the larger systems, that have also received, in addition to the PUC incentives, sizeable local incentives, often from LADWP. Those particular systems reported higher costs than average than systems that had not received those additional incentives.

We find some evidence that the percentage rebate caps which existed under both the CEC and the CPUC programs for a period of time, when they existed negatively affected system costs, at least to some degree. And we even find some weak evidence that the existence and level of the state income tax credit that's been provided to systems under 200 kW in size in the past, may have also impacted costs. Again, at least to some degree.

Moving on, third key finding of the study was that again not surprisingly here, economies of scale are significant to these applications. Again, this should come as no surprise to anyone. We find that the more sizeable systems under the CEC's program have come in on average about 2.50 a watt cheaper than the smaller 1 kW systems.

And similarly, under the CPUC's program we find that there are largest systems are coming in at about $1, $1.50 a watt cheaper than the smaller installations funded by that program.

Perhaps of somewhat more interest to this Commission, we do see substantial cost variations across different types of installations. Clearly under the California Solar Initiative the CEC is expecting to have a particular focus on the residential new construction market.

And we find in looking at these data in detail, that that market does, in fact, look particularly attractive for solar, especially or at least on an installed cost basis.

There's about 2000 systems that have either been installed in large residential

developments to date, or that have applied for and received approval for a rebate from the CEC for those kinds of large residential new developments. And we find that those systems have costs that on average have been at $1.20 a watt cheaper than residential retrofit applications of similar size installed over a similar timeframe. So, pretty significant economies in the large residential new development market.

Also interesting from this slide we see that those systems that have been installed as part of affordable housing projects have also come in, on average, at substantially lower cost, about $1.90 a watt. There's obviously a far smaller number of aggregate systems in that class than in the large new residential development class.

We looked at a number of other relationships and cost trends, as well. Again, I'm not going to belabor this point here, but we did look at the impact of installer and retailer experience. The impact of owner-installed systems versus contractor-installed systems. The impact of module type, where the thin film modules were used, or more standard crystalline silicon modules were used. The utility service territory in which

the systems were installed; the population density of the area in which the system was installed, et cetera.

We certainly obtained some interesting relationships in each of those instances, but I'm not sure any of those relationships are particularly policy relevant. So let me leave those for your own perusing at your leisure.

As for policy recommendations, you know, frankly we purposely tried to focus our work primarily on credible analysis and tried not to venture too far into issues of policy design. But we couldn't resist ourselves in a couple of areas and did ultimately offer four pretty high level policy recommendations. And I'll just blast through here pretty quickly.

First, based on our research we conclude that reducing nonmodule costs should be the primary goal of a state solar photovoltaic rebate program, especially given the fact that module costs, and arguably even inverter costs, are largely set in a worldwide market that is not going to be greatly affected by the existence of any individual state program, no matter how large that particular program is.

The good news in California, as I described earlier, is that those programs, or programs have appeared to be driving down those nonmodular costs significantly over time, at least historically. And it may well make sense to continue to think a bit more holistically about what specific strategies might be used to continue to target those cost reductions on a going-forward basis.

Second, though the cost reductions under California's rebate programs clearly have been pretty significant, some often point to Japan as a model for how stable and longer term solar markets may drive cost reductions even further. And based on some pretty preliminary work that we present in this report, we find that that sort of tidy view is not an inaccurate one. In fact, the cost of an average residential photovoltaic system in Japan in the year 2004 was about $1.40 lower than costs seen in California in that particular year.

And over the period of 1999 to 2004 the annual cost reduction seen in the Japanese market had been more significant than the annual cost reductions seen in the California market for similar sized residential systems.

More work is certainly necessary to compare these costs on a more equal footing. But it does seem that the more sustained long-term program similar to the program supported by this Commission and the PUC, the CSI program, that that kind of program may well enable greater cost reductions.

So I think it's also important to be a bit realistic here. Yes, the Japanese program has driven down costs more rapidly, more significantly than the historical program in California. But, the differences aren't $5 a watt. They aren't dramatic cost differences between these two efforts.

Third experience I think pretty clearly shows that at times, at least, California has offered overly rich incentives to the solar market. And the customers have not been the only beneficiaries of those rich incentives. And I think to address that concern on a going-forward basis, it certainly behooves the state to carefully analyze the myriad of incentives that are available to solar systems, not just at the state level, but also at the federal level, with the new federal investment tax credit of 30

percent also providing an important boost to solar systems.

And to insure that those incentives together are tuned on an ongoing basis to provide an adequate return, both for the customer and the system installer, but not an overly rich return to those market participants.

And then fourth and finally, again we found significant cost reductions, not only by system size, but also by installation type and other factors. And I think that suggests that it may make sense to consider developing incentives that are a bit more differentiated than the current 2.80 a watt rebate level that's pretty much offered across the board to virtually all installations regardless of size, regardless of installation type, et cetera.

So, that concludes my presentation. If you would like to see the full report, you can go to that particular website. And no doubt all of you are ready for lunch, but if you have any questions I'm certainly willing to answer them now, or to wait out in the halls and answer them there.

CHAIRPERSON DESMOND: Thank you, Mr.

Wiser. Commissioners, any questions or comments.

COMMISSIONER GEESMAN: No, I'd just encourage you, Ryan, to make the same briefing available to the CPUC and to the Legislature, because I know this is a very topical concern.

MR. WISER: I'll be talking to the PUC next week in a similar forum.

VICE CHAIRPERSON PFANNENSTIEL: Ryan, I just have one kind of technical question that I just didn't understand --

MR. WISER: Sure.

VICE CHAIRPERSON PFANNENSTIEL: -- from the writeup. But I think before I even get there I really want to say I thought it was a really interesting report. And confirmed some of what we had -- what had been the conventional wisdom. But also, I think, led us in some different directions that we may not have thought to go.

My one question had to do with the economies of scale analysis where you showed that the larger systems tended to have a somewhat less per-unit cost to them.

Do you think that's linear? Do you think that that's kind of a continuum that we should be looking at? Or did that have to do with

really the dataset that you were working from?

MR. WISER: Well, I think what we found is that those economies of scale, within both programs, both the CPUC's program and the CEC's program, taper off with system size. So the economies of scale are especially large among the smaller system sizes.

But as you get to the larger and larger systems, the cost reductions begin to taper off. And I think that's pretty consistent, both within -- within both datasets, both the CEC and the CPUC.

VICE CHAIRPERSON PFANNENSTIEL: And going to the point that I took away, I think, more strongly than any, that it's the nonmodule cost that we can perhaps affect the most. And looking at the Energy Commission's concept for the California Solar Initiative, where we'd be working on new construction.

Then I think that that leaves open to us, as I would read this report, a way of working with the builder, the developer community, in terms of how to drive down those nonmodule costs, whether it's the developer bringing in their own skilled forces to do the solar installation, or

something like that.

Is that the kind of finding that you would walk away with?

MR. WISER: Yeah, that's exactly right. And I think that the finding that nonmodule cost is what you should really be targeting because that's what you can really impact, is pretty good justification for a focus on the new construction market. Because that is likely to be the market where those cost reductions can be lower than certainly the residential retrofit market, regardless of any additional efficiencies that we find in the residential retrofit market. Absolutely.

VICE CHAIRPERSON PFANNENSTIEL: I think that's so useful to us. And what I would ask, as you go through mining this data and this analysis for more insights, keeping in mind that is where the Energy Commission's going with the California Solar Initiative, you know, to keep this in mind and fire off to us any further insights that you think would be helpful in that effort.

MR. WISER: Sure, will do.

VICE CHAIRPERSON PFANNENSTIEL: Thank you.

CHAIRPERSON DESMOND: Mr. Wiser, I just had a quick question. While I certainly understand the opportunity to reduce costs in nonmodules right now, did you, or is there any work underway to look at where some of the new emerging technologies are that actually can provide the reductions in the module costs? Because it's not going to be one or the other; it's the combination of two that's going to move us in the direction we want to go.

And that's where most of the, at least the investment money seems to be going, is not on the expectation that I can install it faster than you can, or I can hire cheaper laborers. But rather that they're looking at some of the emerging technologies. And I think our PIER program supports that.

MR. WISER: Yeah, we absolutely need cost reductions in all components of the PV installation to make these things cost effective on a longer period of time. That much is very clear.

You know, I think that while California, with respect to a deployment program, is unlikely to affect dramatically the cost, the sort of going

price of the worldwide modules, there's no doubt that California could have an impact on the R&D that goes into those developing those new class of modules and driving those costs down.

So I think that's on the R&D side; and the early commercial side. That's really where California can put some money in and potentially earn pretty good returns, in terms of driving down those costs.

CHAIRPERSON DESMOND: Thank you.

COMMISSIONER ROSENFELD: Ryan, I have a question for you. First of all, as everybody has said, this was a great report. Thank you very much.

I do want to spend a minute or so on this business of how small it pays to go; that is the dependence on whether you put in a 1 or a 2 or a 3 kilowatt system.

And I have two questions. First of all, here the bandwagon seems to be 2 kilowatt systems or higher. What about Japan and Germany? Where do they come out?

MR. WISER: The Japanese program has, in large part, encouraged systems that are pretty similar in size on average to the California

program. The California program, the size of the systems, on average, has increased over time, especially within the residential retrofit side of the house.

And the Japanese program has had average system costs that are pretty similar to those in California for the residential retrofit markets.

In new construction the average system costs are closer to the 2 kilowatt range that you just described both within the California market and the Japanese market. But the residential retrofit applications have oftentimes come in at slightly higher sizes, 3.5 kilowatts for example.

COMMISSIONER ROSENFELD: I say this because my sort of personal point of view, which I think is unrealistic, is I would love to see another million solar roofs with white roofs which take part of the load, and a kilowatt or 1.5 kilowatt. But everybody tells me that's not realistic; there are certain thresholds that you've got to get to.

MR. WISER: Yeah, and I think the difficulty here is that especially in the retrofit applications there's just a certain amount of installation labor and transaction costs you've

got to overcome and --

COMMISSIONER ROSENFELD: No, I was thinking mainly about new buildings.

MR. WISER: Yeah, I think new buildings people oftentimes are talking about 2 kW systems. And I actually suspect that the average system cost in California among the residential class may decline a bit over time, in large part because we now have a federal 30 percent investment tax credit that's capped out at $2000 per residential customer.

And that, I think, is going to push that average system cost down perhaps a little bit at least over time. But, yeah, I think that both for residential retrofit and for new construction, figuring out how to reduce nonmodule costs and get the installations in quickly and cheaply is probably the best thing that we could do to drive down the system sizes from where they are today.

COMMISSIONER ROSENFELD: Thanks a lot.

CHAIRPERSON DESMOND: Thank you. Next up, Chief Counsel's report. Mr. Chamberlain.

CHIEF COUNSEL CHAMBERLAIN: Yes, Mr. Chairman, I have what I hope will be a very brief closed session on a matter of pending litigation.

And that's all I have today.

CHAIRPERSON DESMOND: Okay.

EXECUTIVE DIRECTOR BLEVINS: No report, Mr. Chairman.

CHAIRPERSON DESMOND: From the Executive Director.

We do not have a Legislative Director here, but I'm assuming no one else is here representing OGA, so no reports there.

Ms. Kim, Public Adviser, anything to report?

MS. KIM: No.

CHAIRPERSON DESMOND: No, okay. Public comment period. I know that I have a card here from Mr. Orozco from Sempra who wishes to comment on agenda item number 12.

And is there anyone else on the phone or in the audience today who wishes to make a comment? No.

Please.

MR. OROZCO: Good afternoon, Commissioners, Chairman. Real briefly, on agenda item 12, Commissioner Geesman, I share your concern that a project that length of time on a pressing issue before us could cause folks to

delay action on resolving sort of LNG issues.

Sempra Energy is our gas company, and our San Diego Gas and Electric, or Sempra Energy Utilities, we are the largest distributors of natural gas in the United States. We have over 22 million customers.

So this has been an issue like the Commissioner has said that we have been looking at for years on off-spec gas, or hot gas, or rich gas, whichever you wish to call it.

A few years back we met with Cal-EPA Secretary then Winston Hickox, and talked about the gas quality issue. And he said if this is so important to you why don't you guys just start doing your own research. Why are you waiting for the state.

And we took him up on that and we've done that. And so we started a gas quality stakeholders working group. And we have, in fact, two folks from the Energy Commission who are on that stakeholders working group, Jairam Gopal, and until recently, David Maul.

We also have folks from ARB who are on that advisory, Gary Yee and Dean Simeroth, who work on the gas quality issues at ARB.

So we have been really pressing forward on this issue. While I share your concern, Commissioner Geesman, I think that we are very supportive of the augmentation from the PIER program for $3 million. We need additional assistance. We have pulled together some resources of our own, as until recently we had some natural gas funds for research, and they're now here.

But, we pulled together some funds and we started our research, and we're moving forward. But we see this contract as augmenting what we're doing.

Our hope is that we coordinate our stakeholders working group with your PIER research project folks, that as information comes out or is available that it will come out to the public and be helpful and move forward.

So, while sharing your concern, I just wanted to point out that Southern California Gas Company, San Diego Gas and Electric, Sempra Energy Utilities are supportive of the augmentation. I'll leave it at that.

CHAIRPERSON DESMOND: Thank you. Anyone else?

Not seeing anyone else, we'll bring this meeting to a close and retire into executive closed session back in my office.

Thank you.

(Whereupon, at 12:36 p.m., the business meeting was adjourned to executive closed session.)

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CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Business Meeting; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor in any way interested in outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 13th day of February, 2006.